The RUBBER AGE

225 Fourth Avenue, New York

VOL. XVII. JULY 10, 1925 NO. 7

BRITISH BLAME AMERICAN INDUSTRY FOR HIGH PRICES OF CRUDE RUBBER

In Cables to Rubber Association Eric Miller States that American Rubber Manufacturers Should Have Abandoned Hand-to-Mouth Buying Policy—Last Cable Unanswered

NEW YORK, July 3, 1925.—Taking their key-note from the statement of Eric Miller in his cable to the Rubber Association on June 5, to the effect that "the present situation would never have arisen if they (American rubber manufacturers) had shown reasonable foresight and pursued sound buying policy during past twelve months instead of hand-to-mouth," a veritable barrage of similar statements has come from London within the past week.

In a statement issued on June 18, Symington & Sinclair, London rubber importers say, "What our American friends are suffering from is not so much the scheme itself, as their own obstinate refusal to understand its provisions and work in with it ..... These gentlemen seem to forget that the present scarcity has been wholly brought about, not by the Restriction Act itself, but by the fact that they themselves chose of their own free will to break up the Restriction Scheme this time last year by forcing the price down to about 9½d. per lb."

On June 28, according to a cable to the *N. Y. Times*, "the British Government made it quite clear that it will not interfere with the rubber restriction scheme. The rubber trade thinks that what it regards as misguided agitation to smash the scheme will now cease entirely. Manufacturers are now blamed for the present position. It is believed that if they had not neglected the safety device which was inserted into the scheme for their benefit there would have been at least 20,000 more tons of rubber available today.

"Instead, the manufacturers existed from hand-to-mouth, thereby keeping prices down and preventing any increase in the exportable percentage. If they had bought what they really required early in the year they would have been assured larger supplies later on."

And, according to American manufacturers, the British seem to forget that the slump of 1919-1920 taught them the necessity of buying in a hand-to-mouth policy for their own good.

Statement of Rubber Importer

A leading American rubber importer views the situation in the following manner:

"The situation in rubber is worthy of careful consideration, particularly in view of the hue and cry that has gone up in the newspapers and reflected in bankers'

(Continued on Next Page)

CONTENTS

NEWS SECTION

British Blame America 219
Tire Price Increase 220
Firestone Liberia Tract 221
Plans Rubber Exchange 222
Auto Production Decrease 224
Rubber Exports for May 225
Akron Briefs 227
New Clay Introduced 228
Rubber Acreage Increase 229
Panama as Rubber Field 232
Another Clay Announced 233
Dunlop Progress 234
British Dunlop Financing 236
Factory Equipment 236

FEATURES

Use of Reclaimed Rubber 237
South American Rubber 239
Accelerators—Dubosc 240

MARKETS

Cottons and Fabrics 244
Scrap, Reclaimed & Crude 246
Chemicals 248

ADVERTISING INDEX PAGE 249

COPIES OF CABLES EXCHANGED WITH LONDON SINCE MAY 25

LONDON, May 25, 1925

VILES RUBBERCLUB

Still think releases provided under the scheme will furnish adequate supplies of rubber but if you have any specific evidence showing that ten per cent releases in August and November will be insufficient please cable in detail.

MILLER

* * *

NEW YORK, June 4, 1925

MILLER LONDON

Referring to last exchange cables United States consumption first four months nineteen twenty-five approximately one hundred thirty-four thousand tons. Careful and consevative estimate balance of year average thirty thousand tons per month. Our firm belief ten per cent release August and November will not meet this need particularly if world consumption taken into consideration. Failure of restriction authorities to release rubber more frequently and in greater quantities than provided by quarterly period to meet present emergency strengthens rapidly growing belief that administrators of restriction have not kept faith with American manufacturers. We again refer to assurances by Lord Stevenson and yourself to members of our Association that you could and would control additional releases of rubber in case of a shortage or price crisis which now exists. We now call on you to make good these assurances in order that we may advise our Directors at a meeting which will be called immediately upon receipt of your reply cable.

VILES

* * *

LONDON, June 5, 1925

VILES RUBBERCLUB

From tone of your cable it would appear your members do not realize their own share of responsibility for present situation which would never have arisen if they had shown reasonable foresight and pursued sound buying policy during past twelve months instead of hand-to-mouth. Working on your figures assuming usual season slowing down July, August and 10 per cent releases August and November, I calculate lowest point crude stocks will be passed this month. Am struck by absence of American orders for 1926 even at enormous discount. What is the explanation?

MILLER

(A later cable, following the Akron meeting on June 11, sent to London remains unanswered at this date, July 2.)

Published on the 10th and 25th of each month by Gardner Publishing Co., 225 Fourth Ave., N. Y. C. and Highland, N. Y. Address correspondence to N. Y. office. Subscription rates: Domestic, $2.00; Canada, $2.50; Foreign, $3.00.

Entered as Second Class Matter June 10, 1920, at the Post Office at Highland, N. Y. under Act of March 3, 1879. Advertising Rates Furnished on Application. Forms close 10 days before publication. Allow 14 days if proof is required.

AMERICAN MANUFACTURER BLAMED BY BRITISH

(Continued from Page 219)

attitude, regarding the present market price.

"For four or five years, rubber has been in a most deplorable state. The industry was weighted down with an enormous surplus and the market remained what might be termed a buyers' market. The hand-to-mouth policy seemed to be the only policy for buying. The large factories in this country, through their experiences in 1920, were soon convinced that such a policy would be profitable. For the past year we have persistently maintained that, through the operation of the British Restriction scheme, the surplus would be removed this year and the market would gradually move upward. The move has been, of course, very much more pronounced than any of us anticipated. This was due to a rate of consumption which no one could foresee. Some of the large factories, who were covered for July/August rubber, are now buying because their requirements are exceeding their former schedule of operations.

"As regards prices, the actual statistical position of rubber as a commodity thoroughly justifies the present price situation. Of course, it is uncomfortable for every one, but the world must adjust itself to the new level and the quicker the manufacturers realize the true value and adjust their selling prices accordingly, the quicker the market will become more stabilized at some level. The difficulty today is that they wait until the last moment, hoping for a violent drop in prices and then, when they need the actual rubber, the scramble for what does not exist forces the market against them. They are bidding today 85c for June rubber, 80c for July, with very little offered. Against this, business has been done in October/December at 66c. Such a differential is entirely unwarranted and I look for a sharp advance in the more distant positions.

"Will present prices have a tendency to curtail consumption? They will, to a certain extent. Crepe soles are being discouraged by shoe manufacturers and many articles will undoubtedly be discontinued, but the total tonnage is comparatively insignificant. It is interesting to figure what dollar rubber means to the motorist and perhaps the Ford owner would be the quickest to feel the pinch. If rubber remains at a dollar, tire prices adjusted accordingly, the increased cost to the Ford owner works out about $25.00 per year. With the present rate of wages in the U. S. I think you will agree with me that this is not sufficiently serious to cause any sales resistance. You may ask what effect it would have on the new purchaser of a Ford car. In the new car, it would make a difference of slightly under $30.00, and, inasmuch as the great majority of automobiles in this country are sold on the partial payment plan, the resistance is negligible."

TIRE AND TUBE PRICES ARE AGAIN INCREASED

As expected throughout the industry a number of tire and tube manufacturers have announced increases of 10 to 33⅓ per cent on tubes and 5 to 15 per cent on tires. At this writing (July 1) few official announcements have been received but it is reported that practically all of the larger manufacturers have sent out new lists to dealers.

The General Tire & Rubber Co., announced on June 27 an increase of 33⅓ per cent on tubes with no increase in tires and Fisk announced 10 to 15 per cent increases on tubes and 5 to 10 per cent increases on tires, both changes being effective on July 1. Other reports indicate that Goodyear, U. S., Miller, Goodrich and Firestone will also raise their prices.

It is said in various quarters that small manufacturers are apparently dissatisfied with the amount of increases in tires for they believe that tire prices should have kept pace with the increase in tubes. Stocks in the hands of dealers are low and manufacturers have reduced their stocks to a minmum. As a result of the great publicity given to the high price of rubber and the increases in tire and tube prices which might be expected, there is already evidence that buyers are staying out of the market until prices are more stabilized.

CLYDE E. LOWE CO.

2976 East 81st. St. Cleveland, Ohio

MANUFACTURERS OF

CIRCULAR INNER TUBE MANDRELS

AND

ECONOMY CALENDER SHELLS

Prompt Service ***Let Us Quote You***

PEQUANOC RUBBER COMPANY

Office and Works: BUTLER, N. J.

MANUFACTURERS OF

RECLAIMED RUBBER

WITH A REPUTATION FOR

UNIFORMITY -- RELIABILITY -- CLEANLINESS

FIRESTONE HEADS GROUP TO OBTAIN LARGE RUBBER TRACTS IN LIBERIA

Large Development Planned Including Building of Railways and Roads and Supervision Over Country's Finances—$5,000,000 Loan Is Part of the Agreement

According to reports from Washington, dated June 26, American interests headed by Harvey S. Firestone of Akron, Ohio, have practically concluded negotiations for a concession in Liberia to be utilized in the growing of plantation rubber on a large scale.

Coincident with the conclusion of the tentative agreement regarding the rubber concession arrangements have been made for the flotation in the United States of a loan to the Government of Liberia, understood to be for about $5,000,000 to be used in refunding outstanding obligations and for internal improvements in Liberia, particularly on ports, highways and roads. The Liberian Government is understood to have been invited to send a financial commission to the United States to handle the details of the loan agreement.

A tentative agreement regarding the Firestone concession is understood to have been signed at Monrovia, the Liberian capital. Under present plans the concession would be ratified by the Liberian Congress, it is understood as soon as the financial mission has reported that arrangements have been completed for the loan.

The concession's terms are understood to include the right to construct railways, highways or roads or other means of communication necessary in the development of the rubber project. The terms of the loan are expected to include the right of supervision of customs receipts and, in fact, supervision of the entire financial régime of Liberia, probably by a financial commission of Americans with American experts acting in most of the important capacities.

The rubber plantation was originally a British project, but after the failure of a British firm, ownership was returned to the Liberian Government. Agents of the Firestone interests have for some months been conducting experiments on this plantation and are understood to be convinced that climatic and soil conditions are ideal for the growth of rubber. Trees now growing on this small plantation are expected to be used for seed purposes on vast new areas.

It is expected that water transportation will be used wherever possible and that as the work progresses good surface roads for automotive trucking will be built. Railway projects are also under consideration. The working out of the Firestone project, which is expected to be a large and competitive undertaking, is expected to mark the beginning of a new era in the Liberian Republic, and perhaps lead to other enterprises for the development of natural resources in Liberia.

Under the Liberian law no white foreigner can own land. The Firestone concession, therefore, is understood to involve the granting of a long-term lease.

The Liberian Loan Commission is expected to arrive in New York soon.

McNulty Returns from Europe

J. A. McNulty, importer of dry colors used in the rubber industry, with offices at 114 Liberty St., New York City, returned from his European trip on July 6. He sailed from the United States on June 27 and called on numerous producers of rubber colors in France, Belgium and England. While in the latter country he was the guest of Mr. Leech of Leech, Neal & Co., red oxide manufacturers.

Moore & Munger Move

Moore & Munger, dealers in clay, recently moved from 29 Broadway to 32 Rector St., New York, where they have a whole floor. The telephone number remains unchanged—Whitehall 0714.

For Quality Tires

BLACK DIAMOND and BISON SUPER RECLAIM were developed to fit into the highest grade type of compounds.

BLACK DIAMOND—the carbon black reclaim, a dense stock with exceptional resistance to abrasive wear, is being successfully used by manufacturers of high pressure and balloon type tires.

BISON SUPER-RECLAIM — its strength, stretch and rich rubber content make it the ideal stock for frictions of high grade tires.

We make no effort to compete with ordinary types of reclaims with these two brands.

U. S. RUBBER RECLAIMING CO., Inc.

100 E. 42nd. St., N. Y. Factories: Buffalo, N. Y.

"42 *Years Serving the Industry Solely as Reclaimers.*"

METAL AND RUBBER CLUB PLANS RUBBER EXCHANGE

A new club for metal and rubber importers was recently formed in New York, called the Metal and Rubber Club, Inc. The formation of this organization is said to be an offspring of the Metal Club which is closely connected with the Metal Exchange. Plans now call for the formation of a Rubber Exchange, which is of especial interest at this time in view of F. R. Henderson's recent announcement of a similar plan.

The club will move into new quarters the middle of August, now has 270 members, according to J. H. Lang, of the American Metal Company, president of the club. The club was first designed to include 200 members, but the limit has been advanced to 300. Checks for $110, covering dues and tax, are being mailed by members to H. K. Masters, Room 1122, 111 Broadway, New York City. According to Mr. Lang, the new Metal and Rubber Club will be one of the handsomest, most complete and convenient clubs in the city.

Grasselli to Build

The Grasselli Chemical Co., Cleveland, Ohio, has concluded negotiations for the purchase of a tract of land near the city limits of Toledo, Ohio, totaling about 100 acres, as a site for a proposed factory, for which plans will be prepared in the near future. It is stated that the new plant will be devoted to the production of chemicals for agricultural purposes, with initial cost placed at $250,000 with machinery.

IT PAYS TO MICRONIZE

The
BOOT UPPER

ALONG with flexibility and sound ageing properties the modern wearer of quality rubber boots and heavy rubbers demands *Resistance to the Stubbing of Rocks and Bumps: Immunity from the Attack of Oil and Chemicals; and that General Toughness and Endurance which are obtainable only through the Liberal Incorporation in the Upper Compound of*

MICRONEX
Reg. U.S. Pat. Off.

The World's Standard Gas Black

Binney & Smith Co
41 E. 42nd Street-New York City

MEETING HELD IN BOSTON ON RUBBER DEVELOPMENTS

By Quincy Tucker

On June 25th, a dozen officials representing rubber manufacturers in the Boston district, gathered at the Boston Yacht Club, at the invitation of Quincy Tucker, to meet Edgar B. Davis, founder of the U. S. Rubber Plantations in Sumatra; but who resigned as vice president of the U. S. Rubber Co. in December, 1918, after some 9 years experience in the cultivation of the Hevea rubber tree.

Mr. Davis has his home 20 miles south of Boston, but makes frequent trips to his producing crude oil property in Texas, for which it is said he has refused thus far several large offers, but when finally disposed of to advantage, it is felt that Mr. Davis can be urged to reenter the rubber plantation business on a huge scale.

The speech of Edgar B. Davis cannot be quoted by request; but his hearers were convinced that he has the diplomacy to negotiate with the British, and the best qualifications for extensive plantation development in Sumatra.

The writer proposed to Dr. John R. Johnston of the United Fruit Co., that bananas be grown in the Amazon Valley with rubber and other products as side lines, drawing attention to the ample depth of water in the Amazon River and tributaries for the "Great White Fleet" of the United Fruit Co. New "Banana Land" is always being opened up as the soil will only support banana crops a few years. It was also pointed out that rubber is more profitable than sugar now. Although the Amazon Rubber Survey has not yet been published, the writer, who is familiar with the Amazon Valley, recommended the general well-drained region within a 100 mile radius of the town of Santarem at the junction of the Tapejos and Amazon Rivers as an excellent location for the United Fruit Co., providing Brazil arranges for Chinese coolie labor as planned. The Tapajos River is the only large clear water river of importance, hence the town of Santarem (midway between Para and Manaos) would make an excellent base of operations.

Soapstone Production

The total quantity and value of talc and soapstone sold by producers at 1924 was 203,821 short tons, valued at $3,515,556, according to the Geological Survey. These figures represent an increase of 4 per cent in quantity and of 17 per cent in value over 1923. There were twenty-seven producers in 1924, as compared with twenty-five in 1923. Figures for 1924 follow:

	Short tons	Value
New York	78,340	$1,162,488
Vermont	61,653	573,747
Virginia	28,219	1,306,388
California	16,335	247,799
Pennsylvania and New Jersey	8,281	83,296
North Carolina	6,093	81,523
Maryland	3,015	29 767
Georgia	1,885	30,548
Totals	203,821	$3,515,556

RUTHERFORD SEES REAL CRISIS IN THREE YEARS

"Demand for rubber products is the heaviest in recent years, and continues without abatement," recently said W. O. Rutherford, president of the Rubber Association of America and vice president of B. F. Goodrich Co., sailing on the Leviathan for a ten weeks' trip abroad.

"The only cloud on the rubber industry's horizon at present is the crude rubber situation. I think that will be dispelled before long. The rubber industry demonstrated during the period of depression great resourcefulness. It emerged with broader vision and more scientific methods of distribution and production. It can be depended upon to clarify the present crude rubber problem with equal dexterity. This in any event, is purely an inter-industrial matter, and an exchange of opinions and facts will rectify the balance.

"The present price of crude rubber is causing concern. The real crisis in the rubber situation will be two or three years hence. The rubber industry for the last five or six years had a rather difficult time. As a result, rubber planters became greatly discouraged and largely discontinued planting. This has resulted in a temporary shortage in rubber. With the improvement in the rubber situation, rubber planters have revived their interest and will now take up planting again. It takes about six years to put a rubber tree in the state of production.

"The Goodrich company today is operating at capacity in the tire division and practically at capacity in the mechanical and commercial divisions. We are producing about 25,000 tires daily, a large majority being balloons.

"Motor transportation is drawing heavily on the output of rubber manufacturers," continued Mr. Rutherford. "New car production has gone on at an unprecedented pace. I am advised that in April and May the automobile industry produced more cars, trucks and buses than in any two previous months of its history.

"The volume of tire business being done could in itself be taken as indicating generally healthy and prosperous conditions. But this energetic demand for rubber is not restricted to transportation; it is general.

"The scope of the rubber industry's market and the intensity of the demand is, in a measure, largely of self creation. By ingenuity and vision, the industry has developed many new uses for rubber. It has supplanted other basic materials with rubber."

Ajax Not to Build in Euclid

The Ajax Rubber Co. has denied the rumor that the company will build a factory at Euclid, Ohio.

Chemical Equipment Show

Numerous manufacturers of chemicals and chemical equipment maintained exhibits at the Chemical Equipment Show held in Providence during the week beginning June 22, ending on June 26. The exposition was held in conjunction with sessions of the American Institute of Chemical Engineers, and the local sections of the American Chemical Society. Over 1000 leading chemists were in attendance at the various meetings. On Tuesday evening a banquet was held at the Hotel Biltmore at which leading factors in the industry gave interesting talks.

Among the exhibitors known to the rubber industry were the following: Paul O. Abbe; H. H. Robertson Co.; U. S. Rubber Co.; American Hard Rubber Co.; Carrier Engineering Corp.; The Dorr Co.; Buffalo Foundry & Machine Co.; The Pfaudler Co., and The Bristol Co.

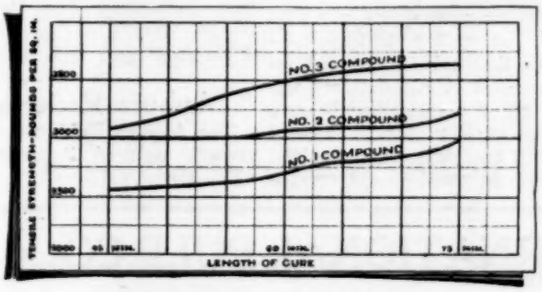
Trimingham Sails

G. H. Trimingham, editor of THE RUBBER AGE, sailed for Cherbourg July 1 on the *President Harding*. He expects to be gone eight weeks during which he will visit the principal industrial centers of England, France, Germany and Italy.

Woolner Succeeds Scheuer

Following closely upon the recent resignation of A. L. Scheuer as president, the Kelly-Springfield Tire Co., announced on July 3 the election of Samuel Woolner, Jr., as president. Mr. Woolner has been with Kelly for about one and a half years and was chairman of the Board at the time of his election.

THERE'S A TREMENDOUS DIFFERENCE IN CLAYS



CURVE CHARTS OF TESTS MADE IN RUBBER LABORATORIES OF AKRON UNIVERSITY

Clay fillers may look and feel very much alike—but the above chart shows clearly how compounds vary when different clays in equal amounts are used.

No. 1. Compound contained 45 parts of the best clay heretofore available.

No. 2. Compound contained 45 parts of clay (one-half as used in No. 1 and one-half our new Cott'n Bloss'm Clay).

No. 3. Compound contained 45 parts of our new Cott'n Bloss'm Clay alone.

Notice the enormous improvement in tensile strength as Cott'n Bloss'm Clay was added. This same result is being obtained every day in actual practice.

Manufacturers after thoroly testing this new clay frequently have wired for their first carlots. They find they are able to use the same amount of clay and improve their products or they can use more clay and get equal results for less money.

This new clay deposit which we have opened, and our present methods of refining and testing insure a fine texture, no grit and absolute uniformity.

Write for five-pound laboratory sample of Cott'n Bloss'm and prices.

COTTN BLOSSM CLAY
TRADE MARK

The American Pigment Company
Ravenna, Ohio

PROPERTIES at Warrensville, So. Carolina. AFFILIATED WITH THE FOLLOWING PLANTS: F. E. Schundler, Joliet, Ill., and Jersey City, N. J.; and Geo. B. Smith Chemical Works, Springfield, Ill. JOBBERS: Wishnick-Tumpeer Chemical Co., Brooklyn, N. Y. and Chicago, Ill.; Tyler-Patterson Co., Cleveland, Ohio; The General Supply & Chemical Co., Trenton, N. J.; Oscar J. Friend & Co., Minneapolis, Minn.; H. W. McCurdy Co., Toronto, Canada.

CHEMISTS WILL STUDY EDUCATIONAL PROBLEMS

Prof. M. L. Crossley, president of the American Institute of Chemists, has just announced the personnel of several important committees of that organization. A committee on professional education has been appointed to study the problems connected with the training of chemists and to suggest some standardized course of study that will qualify the graduate as a truly professional chemist. By supplying such carefully trained chemists to the chemical industry it is expected that much of the inefficiency, due to misfits and poorly trained men calling themselves chemists, will be eliminated. This committee is headed by Prof. James Kendall of Columbia University and numbers among its members many of the leaders in chemical education. Associated with Prof. Kendall are Prof. Treat B. Johnson of Yale, H. C. Parmelee, Editor of *Chemical and Metallurgical Engineering*, W. H. Walker, consulting chemist, Provost Edgar F. Smith, of the University of Pennsylvania, Dr. R. H. Bogue of Lafayette College and the Bureau of Standards, and Dr. M. L. Dolt.

The problems that arise in connection with the employment of chemists are the particular charge of a committee headed by L. R. Seidell of New York. A committee that will consider plans for the establishment of an employment service by means of which the employer may be certain of obtaining the proper chemist for his particular work, and by which the chemist may have notice of suitable openings, is in charge of Dr. H. S. Neiman, editor of *The Textile Colorist*, New York. Strict scrutiny of the qualifications of applicants for membership is the function of the committee headed by Prof. H. G. Byers of New York. The organization of the junior membership is in charge of Prof. A. E. Hill of N. Y. University.

Register Comb Names

The American Hard Rubber Co., Hempstead and New York, N. Y., recently registered in the U. S. Patent Office under Ser. Nos. 214,045, and 214,046 the trade-marks "Ace-Artist" and "Ace-Expert." The trade-marks have been used since last May on hard rubber combs.

Anodex Rubber Incorporated

The Anodex Rubber Corp., New York City, has been incorporated with a capital of 200 shares, no par value. Directors and subscribers are: S. B. Wachtell, 2942 Bainbridge Ave., Bronx, N. Y.; M. Grauf, 3960 Paulding Ave., Bronx, and R. Meisel, 2009 Lefontaine Ave., Bronx.

Auburn Reduces Capital

The Auburn Rubber Co., Auburn, Ind., recently reduced its capital stock from $915,360 to $477,360.

MAY AUTOMOBILE OUTPUT SHOWS SLIGHT RECESSION

A slight recession took place in automobile production during May; output by identical American manufacturers from their plants in the United States and Canada aggregated 382,972 passenger cars, a decrease of only 2.4 per cent from the preceding month, while last year the decline was 16.7 per cent in the same comparison. Production this year increased 33.6 per cent over May, 1924. Manufactures who produced 46,765 trucks in April reduced their May output to 42,322, a decrease of 9.5 per cent, but a gain over last year of 26 per cent.

Dealers in the United States continue to sell cars to users at a higher rate than they receive them, as indicated in a ratio of 104.9 per cent for May of dealers' sales to receipts from manufacturers whose output was 62.7 per cent of total May production; this ratio is somewhat lower, however, than in the preceding month, and considerably less than in May last year, when dealers were rapidly reducing their stocks.

To Make Dental Rubber

The Heatless Dental Rubber Corp., New York City, was recently chartered at Albany with an authorized capital of $5,000. The company will manufacture dental rubber goods. Incorporators are Charles Herman, Marcus Herman, and H. Jacobs of 152 W. 42nd St., N. Y.

INTERNATIONAL PULP CO., *41 Park Row, New York, N. Y.*

SOLE PRODUCERS OF PURE **ASBESTINE** SPECIALLY PREPARED FOR USE IN RUBBER

Covered and Protected by Letters Patent Registered at U. S. Patent Office, Washington, D. C.

LIBERAL WORKING SAMPLE FURNISHED FREE

EMBOSSING CALENDERS

For Artificial Leather, Oil Cloth, Carriage and Automobile Covers

DRYING MACHINES

with Copper or tinned iron Cylinders for Cotton Ducks, Drills and Sheetings

The Textile-Finishing Machinery Co.

OFFICE, No. 83 EXCHANGE PLACE
PROVIDENCE, R. I.

THE VULCANIZED RUBBER CO.

Manufacturers of
HARD RUBBER GOODS
of Every Description
251 Fourth Ave. New York

RESULT GETTERS—

Thats what THE RUBBER AGE want 'ads' are! Try one when you need more equipment or want to dispose of old machinery.

GUAYULE RUBBER

"DURO" Brand Washed and Dried Ready for Compounding

A comparatively small percentage in a compound will make a stock run smoother on calendars and tubing machines, without depreciating the quality

ESPECIALLY USEFUL IN FRICTIONS

CONTINENTAL RUBBER COMPANY OF NEW YORK

120 Broadway
New York

SIX YEAR RECORDS BROKEN BY LARGE RUBBER GOODS EXPORTS DURING MAY

Total of $4,420,000 Breaks all Monthly Records Since 1919 —General Upward Trend in Evidence—Heavy Shipments of Tires Responsible

Rubber goods exports from the United States continue their upward trend. According to the Rubber Division of the Department of Commerce foreign shipments during May totaled $4,421,895 and broke all records since the inflation period of 1919-1920. In addition, this month was the third one in succession for which the value of rubber goods shipments has exceeded $4,250,000, a mark previously reached but once, in March, 1923, since the end of the 1920 boom.

While heavy shipments of automobile tires have been the chief factor in causing the recent high monthly totals, every department of the trade has experienced unwonted activity, and mechanical rubber goods, rubber footwear, rubber sundries and specialties, hard rubber goods, and scrap and reclaimed rubber have all participated in the increased business.

The high monthly totals are the result not of higher prices, but of an increased volume of business for American manufacturers, the unit shipments in practically every line showing an increase over the corresponding period in recent years. For the first five months of 1925, the average monthly value of exports has been in excess of $4,000,000. There are 26 separate classes of rubber goods reported in the official statistics; new high monthly records for unit shipments have been established for 15 of these classes since the beginning of 1925, and 5 of these records were made in May.

The number of automobile casings exported in May was 158,302; of inner tubes, 142,107; and of solid tires, 11,204. Brazil, Argentina, Denmark, United Kingdom, Cuba, and Sweden were in order the leading takers, followed by Australia, Mexico, Philippine Islands, and Japan each over 6,000. Thus it appears that the exports are widely distributed to foreign markets which reduces the possibility of certain territories being overstocked. Doubtless the chance of price increases is causing foreign buyers to lay in somewhat heavier stocks than usual, but in view of the increased business now available in every foreign market, resulting from the steadily mounting motor registrations, there seems not much likelihood of this practice leading to bad results. The condition of the trade in certain markets might well be kept under close scrutiny by large exporters. Overstocking either tends to cause price disturbances through liquidation of stocks of individual dealers at cut rates, or else it is apt to result in deterioration of products carried in stock over an extended period with resultant injury to the reputation of the manufacture.

Exports of waterproof rubber footwear, normally low during this off-season of the year, were small, but there was a good trade in canvas rubber-soled shoes, and shipments of rubber heels and soles were exceptionally heavy. Cuba led the trade in canvas rubber-soled shoes, followed by the United Kingdom, Philippines and Mexico, with Norway, Colombia, Sweden and Canada buying lesser amounts. Shipments to Argentina were very low. Shipments of rubber heels and soles reached a new high level, the total for the month being 329,527 pounds valued at $116,752. Rubber heels and soles went largely to Mexico, Cuba Colombia, Argentina, Philippines and Denmark. There have been two recent tariff changes which should result beneficially to our export trade in rubber footwear, namely the removal of the 50 per cent surtax on canvas rubber-soled shoes imported into Salvador and the lifting of the import license requirement from rubber shoes imported into Germany.

The trade in rubber belting for the

(Continued on Next Page)

Carbon Black Research

To improve the value of carbon black *in rubber*—

To standardize a product of uniformly high re-inforcing power—

These are the aims of our technical staff, comprising some of the most experienced engineers in the industry.

We will welcome an opportunity to demonstrate the superiority of a product intelligently controlled for use in rubber, as opposed to grades which may be suitable for other purposes, but are deficient in compounding properties.

J. M. HUBER, Inc.

MANUFACTURERS

MAIN SALES OFFICE
130 West 42nd St.
New York City

FACTORIES
Swartz, La. and
Breckenridge, Texas

STOCKS CARRIED AT

Akron, Boston, Chicago, Cincinnati, Cleveland, St. Louis, Hamburg, Germany, Los Angeles, New York, Philadelphia, Antwerp, Belgium, Toronto, Can., London, Eng., Paris, France

PETERSON SAYS BRITISH BLAME U. S. FOR CRISIS

The British rubber growers and dealers are perfectly willing to have American manufacturers continue the course they have followed heretofore, buying only for immediate consumption. They are also thoroughly willing for them to attempt to encourage production by Dutch growers to the exclusion of the British and to have the rubber manufactuers of America devote whatever sum they deem adequate to that end. Such policies would leave rubber prices high, the British growers assert, according to Fred B. Peterson, prominent dealer and importer, who has just returned from London.

"The British rubber men feel that the American manufacturers have only themselves to blame for their present situation," Mr. Peterson said. "They did not take advantage of the provisions of the Stevenson plan which would have worked for their benefit, but proceeded on the assumption that something would transpire which would make the plan ineffective and break prices.

"They bought from hand to mouth although they could have secured rubber for future delivery well under the spot price had they been willing to do so. This has reduced the supplies of spot rubber to a point where the stocks in London now are around 5,500 tons as compared with 50,000 tons a year ago. They are scrambling for this small amount to fill their immediate needs, although they can buy for future delivery later this year at prices well under the spot market."

Mr. Peterson added that next year's rubber can now be bought for around 44 cents a pound, although spot quotations are hovering around 75 cents. He declared there was no possibility of a famine in rubber and said this was shown by the willingness of growers to contract for future supplies.

"If the American manufacturers intended to go into the business of planting rubber themselves, they could have secured plantations for a song when rubber was down, but the cost now is likely to be in direct proportion to the advance in prices and profits to the growers."

The use of reclaimed rubber, Mr. Peterson indicated, would become widespread in view of present prices, but he showed that this would not suffice to fill the demand for new crude supplies. In the manufacture of hard rubber products much reclaimed rubber can be used, but in making tires only a certain percentage of salvaged product can be utilized.

Trick Rubber Sign

Motorists in Sandusky, Ohio, have recently registered many complaints against a "steel or concrete" sign in the middle of the Wayne and Washington Street crossing which on investigation was found to be of rubber. It stands upright in the road, with the word "Stop" painted on it, and flops back into position when hit by an automobile wheel.

Mr. Hotchkiss Corrects Statement

In the June 25 issue, THE RUBBER AGE quoted Mr. H. S. Hotchkiss as saying, upon his recent return from Europe, that "..... and if users were taking advantage of the Stevenson plan, the price would not be at present levels."

We are informed by Mr. Hotchkiss that he was incorrectly quoted in the above statement, which should have been as follows: ".... the British contend if users had taken advantage of the Stevenson Plan the price would not be at present levels."

The corrected statement changes entirely the thoughts expressed by Mr. Hotchkiss and are given prominence here so that the industry may not be under any misapprehension as to what was meant by the Hotchkiss interview. (EDITOR)

May Rubber Exports

(Continued from Page 225)

month set a new record, the exports amounting to 395,947 pounds valued at $223,722. Chile was the outstanding large market, but Mexico, Brazil, United Kingdom, Portuguese East Africa, Canada and Cuba each took large amounts. Rubber hose exports amounted to 557,534 pounds valued at $216,045 also establishing a new high monthly record, the United Kingdom, Canada, Mexico, Cuba, South Africa, Chile and Japan leading in takings. Exports of packing were light 111,054 lb. valued at $50,581.

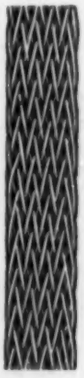
In tubing machine work a compound of rubber and fillers alone tends to emerge from the machine in a rough, knotty form. The addition of 3 to 5% of Factice will eliminate this difficulty.

From—
"The Practical Side of the Use of Factice."

RUBBER FACTICE OF HIGHEST QUALITY
THE STAMFORD FACTICE
STAMFORD CONN
THE STAMFORD RUBBER SUPPLY CO

Est. 1900 Inc. 1919

THE KUHLKE MACHINE CO.
Formerly Jones & Kuhlke
AUTOMOBILE TIRE MOLDS and CORES
GENERAL MACHINE WORK
Akron, Ohio



Perfect Beads

Entire freedom from bead trouble in the construction of straight side tires is assured by the use of either National "(Patent)" High Tensile Strength, Flat Woven, Bead Braid or our new (Pratt Patent) Bead Cables. These cables, made to dimensions specified, have seven strands, yet only one piece of wire is used without soldered, welded or brazed joint.

Write for working samples of either National flat braid or Pratt cables (no charge to tire manufacturers) and full information as to our products and service.

Our engineering department tests beads and furnishes complete confidential reports as to their stretch, set and bursting point, without charge. Inquiries solicited regarding this special service.

National Standard Company
Niles, Michigan

Kleinert's
REG. U.S. PAT. OFF

THE I. B. KLEINERT RUBBER CO. is now located in its new headquarters at 485 Fifth Avenue, New York City, corner of 41st Street, opposite the Library.

Makers of

Dress Shields	Reducing Garments	Powder Puff Pockets
Bibs	Bathing Caps	Shirlastic Ribbon
Guimpes	Rubber Sheetings	Tourist Cases
Baby Pants	Hose Supporters	Dress Protectors
Crib Sheets	Household Aprons	Sanitary Goods

Resignations from Mt. Vernon

W. M. Perkins, president, and G. H. Jones, secretary and treasurer, of the Mt. Vernon Rubber Co., Mt. Vernon, Ohio, have tendered their resignation to the stockholders and the Board of Directors, effective June 12.

Production of Guayule

In a statement recently issued by the Crude Rubber & Foreign Produce Corporation, 250 West 57th St., New York, the following interesting statistics on guayule production were given:

The original stand of guayule shrub in the field which was milled from 1907 to 1915 was approximately 300,000 tons.

Due to political disturbances in Mexico, operations were curtailed from 1914 to 1924.

The milling capacity at the present time is not over 50,000 tons of shrub, annually. New equipment now being installed will increase millings, commencing September 1st to 67,000 tons annually, which will yield about 11% rubber—7400 tons.

Annual Production in Tons

1911 — 8,816	1918 — 1,329
1912 — 6,356	1919 — 1,501
1913 — 4,561	1920 — 1,037
1914 — 658	1921 — 58
1915 — 2,594	1922 — 281
1916 — 1,257	1923 — 1,224
1917 — 1,863	1924 — 1,345
	1925 — 5,179

Jan.-May, 1,229 June-Dec. (Est.), 3,950

AKRON BRIEFS

Directors of the Mohawk Rubber Company, Akron, on June 22 declared two dividends of 7 per cent preferred stock. The first is 2 per cent payable July 1; the second one per cent payable July 20. One per cent of the first dividend and one-fourth of one per cent of the second dividend are deferred payments, according to R. E. Bloch, treasurer.

Profits were reported as better than a year ago at this time, while it is claimed the factory has enough crude rubber on hand to care for all immediate needs. About 1400 tires are being turned out daily.

* * *

A. J. Leeper of Mogadore on June 24 purchased for $15,000. the defunct Interlocking Cord Tire & Rubber Company of that town. The transaction was handled by Stanley Denlinger, trustee in bankruptcy. The plant may again be operated.

* * *

Hayden Shively has been promoted to the position of general office manager of the crude rubber purchasing station of the Goodyear Tire & Rubber Company at Singapore, and sails for the East Indies early in July.

* * *

The B. F. Goodrich Company, Akron, has started work on the second story of Building, No. 6, which will cost $56,000.

* * *

A regular quarterly dividend of 1¾ per cent on preferred stock payable July 1 was declared by the Williams Foundry & Machine Company.

RUBBER JEWELRY IS LATEST FAD

The latest fad at Deauville is rubber jewelry. It is worn with smart bathing costumes, is unharmed by the water and looks very well. The principal imitations are of jade. Rubber swimming suits are also very popular at Deauville.

Ford Increases Capital

The Ford Rubber Co., New York recently increased its capital from $100,000 to $5,000,000.

British Exports Larger

A very interesting feature of the British Trade Returns for May, just issued, is the larger shipments of rubber which were responsible for an increase of £1,408,000 ($7,040,000) under the head of re-exports. During that month re-exports of rubber amounted to 294,921 centals (100 lbs.), against 131,498 centals in 1924, an increase of about 125 per cent. But owing to the rise in price, the value of rubber exports was £2,675,000 ($13,375,000), an increase of £1,973,000, ($9,865,000) or 281 per cent. The bulk of the larger re-exports of rubber went to the United States, which took 181,552 centals, against 39,029 centals in May, 1924.

What Is the Most Convincing Language?

Undoubtedly, the laboratory speaks more truths than the typewriter, and it speaks a most convincing language.

You will believe your own analysis, won't you? And we are willing to convince you of the superior merit of AZO Zincs in this most difficult manner.

The benefits will accrue for years.

Use More Zinc Oxide

American Zinc Sales Co.

DISTRIBUTORS FOR

American Zinc, Lead & Smelting Co.

COLUMBUS P. O. Box 1428 | ST. LOUIS Pierce Bldg. | NEW YORK Prudence Bldg.

SAFETY CONGRESS TO BE HELD IN CLEVELAND SOON

Men who are directing accident prevention work in the rubber industry will attend the Fourteenth Annual Safety Congress which will be held at Cleveland, Ohio, from Sept. 28th to Oct. 2nd, when there will be special sessions devoted to discussions of problems of particular interest to each group. Addresses will be delivered by more than 200 speakers and several thousand men and women are expected to attend. The delegates will include industrial captains, plant superintendents, factory foremen, police chiefs, municipal officials, educators, health heads and others interested in the numerous activities within the scope of the congress. The features will include general gatherings, sectional sessions, exhibits, contests, moving pictures, dinners, dances and other forms of entertainment.

Rear Admiral William S. Sims, who is president of the Newport, R. I. Safety Council, will address the congress on "Safety in the Nation" and Howard Coonley, president of the Walworth Manufacturing Co. who is also the president of the Massachusetts Safety Council, will speak on "The Relationship of Safety to Operations in Modern Industry" on Monday morning, Sept. 28th and in the afternoon there will be a meeting for industrial executives. A general public safety and health session will be held on Tuesday, Sept. 29th. A round table discussion will be held on Wednesday, Sept. 30th.

TOY BALLOON TRAVELS 700 MILES

A toy rubber balloon released by a boy in a meadow near Geneva, Switzerland, was captured at Salona, Yugoslavia, by another boy after it had traveled 700 miles and remained in the air fifteen days. The boy who released the balloon attached a slip of paper with his address.

World Shipments Gain

World rubber shipments for the first third of 1925 amounted to 146,555 tons, of which amount 135,487 tons were plantation rubber and 11,068 tons wild rubber. In the corresponding period there were 154,200 tons retained for consumption, of which 117,501 tons were retained by the United States. Under the restriction policy in force the revised standard production for 1925, according to advices received by the Bankers Trust Company of New York from its British information service, totals 326,000 tons: 260,000 from British Malaya and 66,000 tons from Ceylon. An additional 15,000 tons will be allowed to be exported under "special allowance." The estimate of the world's requirements for rubber in 1925 is 503,500 tons, and it is assumed that of this amount 38,812 tons will have to be met out of stocks, the balance coming from new production.

"WHITE FLOSS" CLAY INTRODUCED TO INDUSTRY

The Harshaw Fuller & Goodwin Co. have just announced that they have been appointed sales agents for a new clay called "White Floss" produced in the McIntyre, Ga., plant of the Akron Pigment Co., which is owned and controlled by the Thompson-Weinman Co., of Cartersville, Ga., and New York.

The plant, especially designed to produce an extra fine clay, is equipped with machinery for wet grinding, and employs the latest scientific methods of refining and classifying.

The clay is a hard abrasive clay, well adapted for the use of rubber manufacturers. It is water ground, water floated, and absolutely bone dry. It is free from free silica. Stocks of this clay are to be carried at McIntyre, Georgia, the home of the plant, and The Harshaw Fuller & Goodwin Company's Cleveland warehouse. Samples are now in the hands of most of the large rubber manufacturers, and many tests have been run showing very satisfactory results.

Fisk Sets June Record

The Fisk Rubber Company, Chicopee Falls, Mass., reports estimated sales of $7,500,000 for June, a new high record in the company's history. Net profits for the month after depreciation, interest and taxes, were approximately $1,000,000. The company also announced an advance of 5 to 10 effective July 1, and a 10 to 15 per cent increase in tube prices.

Aero Brand
DPG
DIPHENYLGUANIDINE

Aero Brand D. P. G. is manufactured from our own raw materials by a new and economical process. D. P. G. is at present the most popular accelerator on the market. Aero Brand D. P. G. assures the rubber manufacturer of a product of the highest purity from a thoroughly dependable source of supply.

Aero Brand D. P. G. Stock Is Carried at

Warners, New Jersey
Akron, Ohio
San Francisco, California
Azusa, California
London, England

Address all communications to New York office

AMERICAN CYANAMID CO.
511 FIFTH AVENUE NEW YORK, N. Y.

How many of the rubber factories in this country are you 'selling'?

Ten percent? Fifty percent? If so, *The Rubber Age* can help you increase your sales among the balance because it is read by the leading executives, chemists and engineers in practically every rubber factory in this country and Canada - twice every month.

We'll be glad to co-operate with you in every way. Write for full information.

THE RUBBER AGE :: 225 FOURTH AVE., N. Y.

U. S. RUBBER PLANS TO INCREASE RUBBER ACREAGE

The United States Rubber Company in a statement issued on June 29, declared that its plantations in Sumatra and Malaya will be able to take care of itself to "a substantial extent in any shortage that may occur." The company is rapidly increasing the yield from its plantation.

The total area of the company's holdings is 111,158 acres, of which 75,000 acres will be planted by the end of 1925, it is stated. The greatest plantation of all is the Holland American Plantations Company—popularly known as "H.A.P. M."— in Sumatra, with a planted area of 45,993 acres.

The company has been actively at work increasing and developing its holdings for fifteen years, the statement says: "In entering upon crude rubber production the company proceeded upon the theory that the American manufacturer that controlled the source of its crude rubber supply would in time occupy a supreme position in the field, a theory that seems to be in a fair way to be proved a correct one."

Cannon Mills to Move

It is announced that the Philadelphia offices of the Cannon Mills, selling agents for Cabarrus Cotton Mills, Kannapolis, N. C., manufacturers of tire fabrics, will move on October 1 to new quarters on the sixth floor of the new Public Ledger Building now nearing completion on Independence Square. The present location of the Cannon Mills offices are 213 Chestnut St., and it is expected that this removal presages a general exodus of other cotton houses further uptown.

PLAN BALLOON RACE IN AKRON CENTENNIAL

The opening feature of Akron's Centennial Celebration will be a balloon race on July 18 between three Goodyear entries and probably one from the Army, to start from Seiberling Field.

An attempt will be made to break the American long distance air record for balloons of 35,000 cubic feet gas capacity now held by Major Maurice Smith of Kansas City who made 450 miles with his pilot balloon in the recent national balloon race at St. Joseph, Mo., won by Van Orman and Wollam, and officially recognized after the race.

Goodyear's trio of air bags are slightly smaller than the "Goodyear III" which won the 1924 and 1925 national races and will be named the "Goodyear IV," "Goodyear V," and "Goodyear VI." It is hoped that the Army will enter a balloon to defend the championship held by Major Smith.

Bullock Represented in Ohio

Fred H. Palmer, jr., 914 Guarantee Title Building, Cleveland, now representing the Brooklyn Color Works, has just taken the account of E. L. Bullock & Sons Company, Inc., New York, in the Cleveland territory.

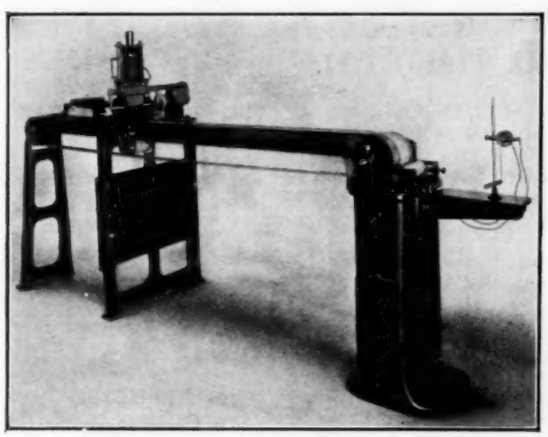
MC KONE TIRE PLANT NOW OPERATING AGAIN

At a meeting of the stockholders of the McKone Tire & Rubber Company, Millersburg, Ohio, held late in June, the company was completely reorganized and new officials were elected. E. B. McKay, of Chicago, who recently purchased a large amount of the McKone stock, will be the new president and treasurer of the company; O. S. Tweedy will be the vice-president and sales manager; and W. J. Rennick will be secretary and assistant-treasurer. Mr. McKay will be the general manager of the company.

R. C. Gunther has been employed as factory manager, and P. H. Slamier as factory chemist. Both of these men have long been associated with Mr. McKay, and are experienced in both the manufacture and sale of tires, tubes and other rubber goods. J. A. McGroff has been employed as superintendent for the plant.

Mr. Rennick, secretary of the company, announced that the company had business already contracted for, that would keep the plant running full force for over a year. To take care of this increasing business it will be necessary to install additional equipment, some of which has already been installed, and more will be installed within the next few weeks.

The company expects to eventually manufacture over 1000 tires a day, and a corresponding number of tubes.



Automatic Traveling Apron with Cutting-Off Attachment

Tubing - tire treads - jar ring and all other stocks delivered from a tubing machine automatically cut to desired length and deflected from the apron. Entirely within control of the tubing machine operator.
Machine equipped with straight or circular knife to suit conditions.

Saving in labor alone will pay for machine within six months to a year.

SPADONE MACHINE CO., Inc.
15 Park Row New York
Exclusive selling agents for
H. MONROE SMITH

Rubber Substitutes

WECCO

ALL GRADES

SAMPLES FURNISHED

MANUFACTURED BY

THE WESTMINSTER CHEMICAL COMPANY

531 South Peoria St., CHICAGO

CABARRUS COTTON MILLS

M. L. CANNON
PRESIDENT & TREASURER

KANNAPOLIS, N. C.

Superior Quality Tire Fabrics

EGYPTIAN-PEELER
KARDED & COMBED
CORD & SQUARE WOVEN

CANNON MILLS, Inc.
Selling Agents

NEW YORK
55 Worth St.

CHICAGO
327 S. La Salle St.

A. W. REID
Representative

By Order of the Liquidators.

THE BELDAM TYRE CO. (1920) LTD.

WINDMILL ROAD BRENTFORD, MIDDLESEX

Valuable Freehold and Highly Important MANUFACTURING PREMISES equipped with HIGH CLASS MODERN RUBBER MACHINERY for the production of Pneumatic Tyres, Tubes and other Rubber Goods.

THE WORKS WITH LAND COVER AN AREA OF ABOUT 3½ ACRES, are within a few minutes' walk of Northfields Station (District Railway) the new Great West Road, Brentford Stations (Great Western and Southern Railways) and near the River Thames.

THE BUILDINGS ARE MODERN, of one story, well lighted, capable of handling an extensive business and *contain* A FLOOR AREA OF ABOUT 90,000 SQUARE FEET.

Electric Power, Lighting, Gas and Water are laid on.

THE HIGH CLASS PLANT AND MACHINERY *has been installed by the best makers*, is up-to-date, in excellent state of preservation and ready to start up immediate operations.

The offer of this valuable, well-known property to manufacturers of Tyre and Rubber Goods presents a unique opportunity for acquiring one of the finest equipped works in the Rubber World.

LEOPOLD FARMER & SONS

will offer the above to auction at The London Auction Mart, 155, Queen Victoria Street, London, E.C.4. on WEDNESDAY 15th July 1925, at 2.30 p. m. (unless previously disposed of). Particulars and plans of:—the Auctioneers, 46, Gresham Street, LONDON, E.C.2. England.

By Order of the Liquidators.

STANDARD TYRE & RUBBER MANUFACTURERS LTD.

BELGRAVE RUBBER MILLS ALPERTON, near WEMBLEY, MIDDLESEX

Extensive FREEHOLD MANUFACTURING PREMISES equipped with HIGH CLASS MODERN RUBBER MACHINERY for the production of Pneumatic Tyres, Tubes, Solid Tyres and Rubber Goods.

THE WORKS AND LAND COVER 14 ACRES, have a frontage to the Grand Junction Canal and almost adjoin Alperton Station (District Railway)

THE BUILDINGS ARE MODERN, of one story, well lighted, capable of handling an extensive business and *contain* A FLOOR AREA OF ABOUT 70,000 SQUARE FEET.

Electric Power, Lighting, Gas and Water are laid on.

THE HIGH CLASS PLANT AND MACHINERY *has been installed by the best makers*, is up-to-date, in excellent state of preservation and ready to start up immediate operations.

The offer of this valuable, well-known property to manufacturers of Tyre and Rubber Goods presents a unique opportunity for acquiring exceptionally well equipped works.

LEOPOLD FARMER & SONS

will offer the above to auction at The London Auction Mart, 155, Queen Victoria Street, London, E.C.4. on WEDNESDAY 15th July 1925, at 2.30 p. m. (unless previously disposed of). Particulars and plans of:—the Auctioneers, 46, Gresham Street, LONDON, E.C.2. England.

Denies Miller Rumor

President Jacob Pfeiffer of the Miller Rubber Co., Akron, Ohio, denied reports current that his company contemplated issuing a 40 per cent common stock dividend. He said directors have not discussed any refinancing plan, including the retirement of the company's 8 per cent preferred stock, of which $9,444,800 is outstanding.

"There is no foundation for rumors of a pending split up in the company's capital stock or of increased dividends," Mr. Pfeiffer stated.

The big rise in Miller common stock from around 125 to above 170 is largely justified, in his opinion, by present good business and high earnings, which equaled $29 a share last year. "The stock had been out of line with stocks of other companies reporting similar earnings," he asserted.

Unit sales of the company during the first four months of the year were 30 per cent greater than last year, according to Mr. Pfeiffer, and business in dollars was between 8 and 9 per cent in excess of the same period last year.

Traveler Accounting Filed

Geo. R. Booth, trustee of the estate of the Traveler Rubber Co., of Bethlehem, Pa., filed on June 20 his final accounting showing a balance on hand of $73,484.03, applicable to the payment of claims, costs of administration and the payment of dividends to general creditors. A meeting of such creditors was held in Easton, Pa., on July 6, in the office of the referee but no report of what took place had been received up to the time of going to press. The purpose of the meeting was to approve the accounts of the trustee, to act on the applications for payments to the trustee, attorneys, etc., and to transact other business.

Goodyear Declares Dividend

The Goodyear Tire & Rubber Co. has declared a quarterly dividend of 1¾% on its preferred stock payable July 15 to stockholders of record on June 20. This is the second such dividend since the resumption in April. Sales for the first six months of this year are very satisfactory and far ahead of the corresponding months of last year.

Pfeiffer Heads Taxpayer's Union

Jacob Pfeiffer, president of the Miller Rubber Co., Akron, is chairman of the Membership Committee of the Taxpayer's Union now in the process of organization. This union has for its object the elimination of unnecessary taxes and a reduction in the burdens now being carried by the voters of the United States. It is said that many business enterprises have been abandoned as a result of excessive tax burdens and it is proposed that this new union will help prevent such mortalities. Manufacturers desiring to join are asked to send for further information by writing to Mr. Pfeiffer.

EXPERT SAYS GUARDS SPEED UP PRODUCTION

Machine guards actually speed up production, says a statement issued by John Sandel, of the National Safety Council's industrial division, who takes exception to allegations to the contrary. Mr. Sandel who, as a safety engineer, is in close touch with numerous industries, does not place any credence in the arguments of some shop managers that production is lowered by the installation of safeguards.

"We have received many reports showing instances of increased production resulting from guarding machinery," declares Mr. Sandel's statement. One company alone, that operates approximately 750 presses, has increased its production 40 per cent as a result of the use of guards. In that particular company's plant there were 36 fingers amputated during 1919. Only two fingers were lost from 1921 to 1925. This instance shows conclusively that the guards resulted in increased production, the reduction of accidents and the elimination of human suffering in many cases.

The use of safeguards for machinery is one of the most important steps in accident prevention work. Men naturally work faster when they do not have to worry about the dangers of being injured. Progressive employers are purchasing machinery and equipment that have the necessary guards because they realize that, while the initial cost is higher, these devices reduce accidents and result in greater production."

Crude Rubber Drying

by the

HUNTER PROCESS

Produces Uniform Stock
Saves Labor
Saves Time
Saves Space

Write for details

Carrier

Engineering Corporation

750 Frelinghuysen Avenue
NEWARK NEW JERSEY

BRANCHES IN

New York	Buffalo	London
Boston	Chicago	Paris
Philadelphia	Los Angeles	Bombay

"WHITE FLOSS"

CLAY

WATER GROUND WATER FLOATED

Highest Test for the Rubber Trade

IN

Gravity — Fineness — Abrasion — Hardness — Tensile Strength — Moisture Content (practically bone dry) — Absolute Uniformity.

Will Save You Zinc On Account Of Its Extreme Fineness

See Report of BUREAU OF MINES on Georgia Clays.

The HARSHAW FULLER & GOODWIN Co.

CLEVELAND, OHIO

SALES AGENTS
for
THE AKRON PIGMENT COMPANY
CARTERSVILLE, GA.

Stocks Carried at

Cleveland, O. McIntyre, Ga.

ORGANIZED PLEA FOR RESTRICTION REMOVAL

It is probable that an organized effort to induce the British Government through the Colonial Office and the Board of Trade to abolish the Stevenson restriction plan will shortly be made by certain British manufacturers using considerable quantities of rubber. The main plank in their platform will be that of lower costs. They maintain the present restrictions result in their having to pay twice as much for the rubber they use, although, despite the 110 per cent rise in the raw material, they have not increased their prices for the manufactured goods.

This statement was apparently made before the issuance of the official announcement of the India Rubber Manufacturers' Association that prices of all classes of general and surgical rubber goods are increased by 10 per cent on and from May 25. For some time before this announcement, however, and despite the manufacturers' assertion, the prices of general rubber goods showed a tendency to stiffen, and higher rates were quoted for new business.

The aim of the manufacturers is to obtain a recommendation from the Colonial Office that restriction should be dropped at the close of the year. Plantations would then, they argue, be able to obtain a price for their whole outputs not much less than that now ruling. If manufacturers do as they threaten, producers will, of course, put forward a strong plea for the retention of restriction. Both sides would have to be heard before a special committee, which would conduct a joint enquiry. In any case, it seems reasonably certain that restriction will not be abolished at the end of the year.

Kent Rubber to Start

The Kent Rubber Products Corp., Kent, Ohio, was recently organized to manufacture dipped goods by F. C. Webster, H. M. Triesch, S. L. Gottshall and and G. W. Rouse. The company will specialize in various kinds of rubber gloves at first but will later manufacture other dipped goods. The old Franklin Mill at Stow and River Sts., Kent, has been leased and the company expects to be in operation by July 1.

Rubber Process Patented

Ernest Hopkinson and Willis A. Gibbons, inventors of a process for employing water solutions of rubber, recently granted U. S. Patent No. 1,542,388, have assigned the patent to the Revere Rubber Co., Chelsea, Mass. The method comprises continuously building up a deposit of rubber solids on a form by disposing the surface of the form in contact with a body of latex, withdrawing moisture from that portion of the latex in contact with the form, and vulcanizing the article.

CLAIMS PANAMA OFFERS RUBBER OPPORTUNITIES

Richard O. Marsh, civil engineer and discoverer of the "White Indian" spoke on "The Rubber Situation, Panama and the White Indian" at a recent meeting of the Rochester (N. Y.) Engineering Society.

Mr. Marsh told of a huge area in the central part of the isthmus which he said was suitable for the growing of rubber. His party found it by an airplane flight never undertaken by anyone. "There are about 1,000,000 acres of land suitable for growing rubber in Panama which means that America ought to be able to gain some control of the rubber situation by an expenditure of around $500,000,000." Mr. Marsh said.

Joins Akron Reclaiming

R. E. Cartledge, who was formerly with the Trenton Rubber Co., Trenton, N. J., has been appointed chief chemist of the Akron Rubber Reclaiming Co., Barberton, Ohio.

"Revere" Registered

The U. S. Rubber Co., New Brunswick, N. J., has registered in the U. S. Patent Office under Ser. No. 198,769, the trade-mark "Revere" which includes the representation of Paul Revere on his famous ride. The trade-mark will be used for rubber thread.

H. MUEHLSTEIN & COMPANY, Inc.

CRUDE AND SCRAP

RUBBER

"For Service"

NEW YORK - 41 East 42nd St.
AKRON - 614 Metropolitan Bldg.
CHICAGO - 114 W. Van Buren St.
BOSTON - 176 Federal St.

WAREHOUSES: Jersey City, N. J.

SULPHUR
FOR THE RUBBER TRADE

"TIRE" BRAND SUPERFINE Rubber Sulphur
"TUBE" BRAND VELVET Rubber Sulphur

Specify "Tire" and "Tube" Brands on your orders. This will assure you of Stauffer quality and service.

Stauffer Chemical Co.,
Houston Texas
San Francisco, Cal. Chauncey, N. Y.

What is Tar?

[For answer see our advertisements in the June 25, July 25, Aug. 25, Sept. 25, Oct. 25, Nov. 25 issues of THE RUBBER AGE]. Reprints furnished on request.

We can help you find the cheapest tar exactly suited to your needs.

Send us your specifications.

PENSACOLA TAR & TURPENTINE CO.
GULL POINT, FLORIDA

The largest individual producer of distilled pine products

Lee Showing Satisfactory

The Lee Tire and Rubber Co., N. Y., is at the present time enjoying the largest volume of sales recorded for the past two years. Sales on Republic Truck Tires manufactured by Lee are 150% greater than 1924.

Mr. Garthwaite, vice president, says that the company is now operating on a profitable basis, having completed last year their consolidation with the Republic Rubber Co. of Youngstown, Ohio, whereby large economies were effected.

Ludwig Joins General Dyestuffs

It is announced that B. A. Ludwig, formerly vice-president of the National Aniline & Chemical Co., has joined the General Dyestuff Corporation of New York as vice-president and director. This corporation at the same time announced that it had acquired the dyestuff business formerly carried on by H. A. Metz and Co., the Consolidated Chemical & Color Co., and the Central Dyestuff & Chemical Co.

Tire and Tube Production

Figures on the relative importance of tires and tubes as compared with other manufactured products in several states in the Middle West were recently issued by *The Industrial Digest* (N.Y.). The statistics show that tires and tubes manufactured in Ohio constitute 60.8% of the national total but only 7.7% of the total manufactured goods in the state. Similarly, the corresponding figures for Wisconsin are said to be 4.5% and 1.7%. These figures are based on a reported total value of tires and tubes of $643,000,000. in the United States.

Brickman Joins Bedford

C. L. Brickman, formerly chief chemist of the Braender Rubber & Tire Co., Inc., Rutherford, N. J., recently joined the Bedford Tire & Rubber Co., Inc., Bedford, Va., as superintendent.

Clayton With International

Robert E. Clayton, formerly research chemist with the New Jersey Zinc Co., Palmerton, Pa., is now chemist and assistant superintendent of the new rubber heel plant of the International Shoe Co. at Hannibal, Mo.

Gorsuch with Corduroy

E. H. Gorsuch, a chemist formerly employed by the Faultless Rubber Co., Ashland, Ohio, and previously with the Mason Tire & Rubber Co., Kent, Ohio, has joined the Corduroy Tire Co., Grand Rapids, Mich.

Thompson, Weinman Move

Thompson, Weinman & Co., Inc., manufacturers of barytes, calcite, whiting, clay, etc., with mills at Cartersville, Ga., McIntyre, Ga., and Sparta, Tenn., recently moved their main office from 101 Park Ave. to 52 Vanderbilt Ave., N. Y.

CLAY FILLER ANNOUNCED BY AMERICAN PIGMENT

The American Pigment Co., Ravenna, Ohio, is offering a new clay filler, from a deposit recently opened on their properties at Warrensville, S. C.

This clay, which has been given the trade name "Cott'n Bloss'm," used in equal amounts, gives as high as an 11% increase in elongation and better than 20% increase in tensile strength per square inch, according to Akron University laboratory tests.

Helps Reduce Costs

These qualities, it is stated, are enabling many rubber manufacturers to use from 5% to 10% more clay and get better results for lower compound costs.

The American Pigment Co. has been in business about four years. R. C. Allen, who is secretary and general manager, was formerly treasurer of the Aluminum Flake Co. of Akron, and for several years handled the sales of the Akron Pigment Co.

As a result of his twelve years experience in the clay business, Mr. Allen has located this new clay deposit and has perfected methods of refining Cott'n Bloss'm Clay to give these unusual qualities of greater elongation and tensile strength, so desirable under present conditions of the rubber industry.

Mr. Allen states that the deposit is practically unlimited and with refining facilities in the South, East and Middle West, they are able to assure reliable service on any volume.

RUBBER HEEL BURRS

FLAT AND CUPPED

Buy the Burrs with

CENTRAL HOLES

J. H. SESSIONS & SON

279 Riverside Ave., Bristol, Connecticut, U. S. A.

The CARTER BELL MFG CO

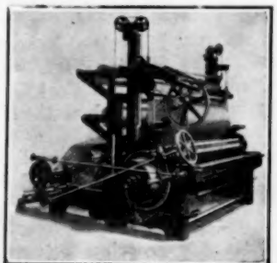
CARTER BELL STANDARD SINCE 1898 RUBBER SUBSTITUTES

150 Nassau Street New York

THE MODERN WAY

to make stripping is to cut it on Cameron machines.

¶ These are the standard sources of strip supply, whether you make mechanical rubber goods, hose, adhesive tape, brake lining, belting, footwear, friction tape, tissue, insulating tapes, sheeting, duck, tire flaps, tire wrap, or other rubber goods in strips.



CAMACHINE 10 MODEL 20

This is a heavy duty Cameron Machine for universal service in all the branches of the rubber industry. It is built in sizes to handle webs up to 82 inches wide, winding rolls to a maximum diameter of 36 inches. A liner apparatus for insertion and removal of liner fabric is included.

¶ Let us send you information on the proper machine for your needs—mail the coupon!

To Cameron Machine Company, a
61 Poplar Street, Brooklyn, New York.

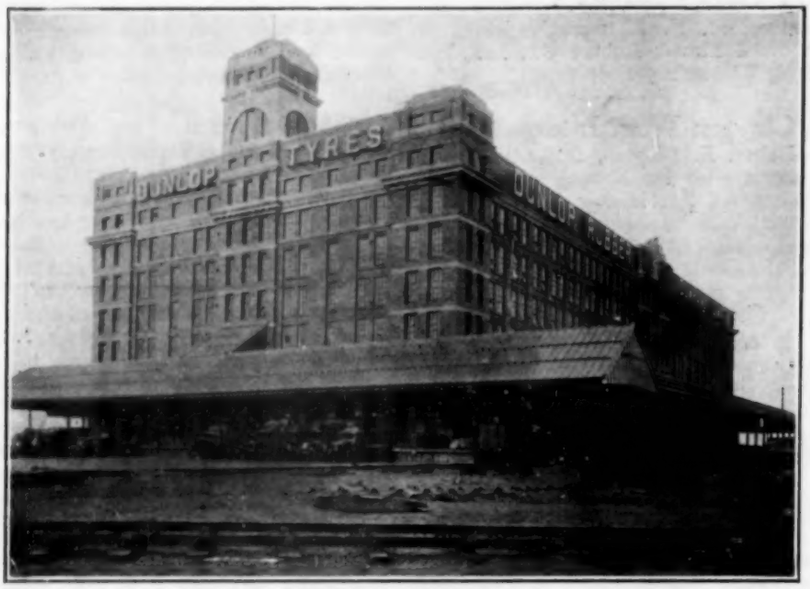
¶ Send us further information on machines for producing .....

Firm Name .....

Address .....

GEDDES SAYS DUNLOP MAINTAINED PROGRESS

At a meeting of the Dunlop Rubber Co., Ltd., just held in London, to approve of the refinancing scheme the chairman, Sir Eric Geddes, was able to tell a very encouraging story of the concern's progress. This year its sales have exceeded all past records and have, in fact, exceeded the directors' estimates. Not only is the principal factory at Fort Dunlop working day and night to full capacity, but the company, to meet the demand, is undertaking large extensions to plant immediately for use this year. Consequent extensions are also necessitated to Dunlop's cotton mills at Rochdale, and the rim and wheel works at Coventry have much additional plant under installation.



The tire manufacturing plant of the Dunlop Rubber Co., at Fort Dunlop, Eng. Dunlop has a larger proportion than any other company of the British trade in tires

"The German factory," said Sir Eric Geddes in his address, "is still making progress and is working full time. The demand for tires is growing in Germany, and there seems every reason to believe there will be a large increase in the number of automobiles in use. We have undertaken extensions to the German factory; these, however, are not in anticipation of demand, but in order to meet an existing demand which we are unable to handle today. Further extensions are in contemplation.

"In France we are operating with increased efficiency, but we are also passing through a somewhat troublesome time with the fall in the value of the franc. Nevertheless, there is nothing in the situation in France which need adversely affect our general trend of progress.

"The Dunlop golf ball has gained predominance in Britain, and the export trade is developing satisfactorily. Although we are beating all records in production, it is only with the greatest difficulty that we can supply the overseas demands. American golfers are insistent in their demand for our ball. In this branch of our activities we contemplate considerable extension next year.

"Our new tennis ball is fully justifying anticipations. When we commenced its production the demand was so great that we were unable to fulfil orders. Now that the output is increasing and has reached considerable dimensions, we are gradually able to overtake orders, and are receiving nothing but praise of the product.

"I have just returned from my visit to the Dunlop Tire & Rubber Corporation of America at Buffalo, and am glad to be able to report that it is making very satisfactory progress. From small and cautious beginnings, the American factory has made steady progress under its very able management and direction. Its output has grown to a figure which is greater than was that of our principal factory, Fort Dunlop, less than two years ago, when the American factory started to operate.

"Fully one-third of Fort Dunlop's output is devoted to export business. Our sales force in every part of the world where we operate reports great and increasing esteem for our products, and, frankly, our difficulty has been to expand productive capacity sufficiently to meet demand. Although the factories have lived up to their productive programs and have, on the whole, exceeded them, the sales end of the business has beaten the factory. The board, however, is taking every prudent step to increase capacity in order to meet the world demand."

A very interesting passage in Sir Eric's speech was that in which he dealt with the rubber industry and restriction. The Dunlop Co. is both a producer and consumer, and in the British Empire by far the most important single factor. In other words, it is not only the largest consumer in the Empire, but also the largest producer. It greatly predominates, however, as a consumer, its demands, excluding the American company, being about 70 per cent of the total consumption of Great Britain.

"No one will deny," he continued, "that there is today a world shortage of raw rubber.

"Comparing 1924 with 1922, we find the raw rubber demand has increased by 75,000 tons per annum, total production has increased by 21,000 tons per annum, and British production, where restriction operates, has decreased by 50,500 tons per annum; and whereas in 1920 73 per cent of the world's supply of rubber came from Malaya and Ceylon—British producing areas—this percentage has fallen to 50 per cent in 1924, and rubber from the Dutch plantations rose from 15 per cent to 37 per cent in the same period. Can any increase in price be viewed as adequate compensation for such a state of affairs?

"The British rubber-growing interest in the world was predominant, and I am concerned to think that this great and increasing industry should be passing away from under the British flag. This company is able to view the matter from both the producers' and the consumers' viewpoint, and whatever merits or demerits restriction may have had, we feel the time has now arrived when it ought to be reviewed by an entirely impartial body, before whom the views of growers, manufacturers, and users could be put. The present shortage and the transfer of our share of production to foreign countries would appear to be ample justification for this course Also, it is certainly open to doubt whether the present scheme is fairly fulfilling its object, and whether it is to the good of the industry and the community at large.

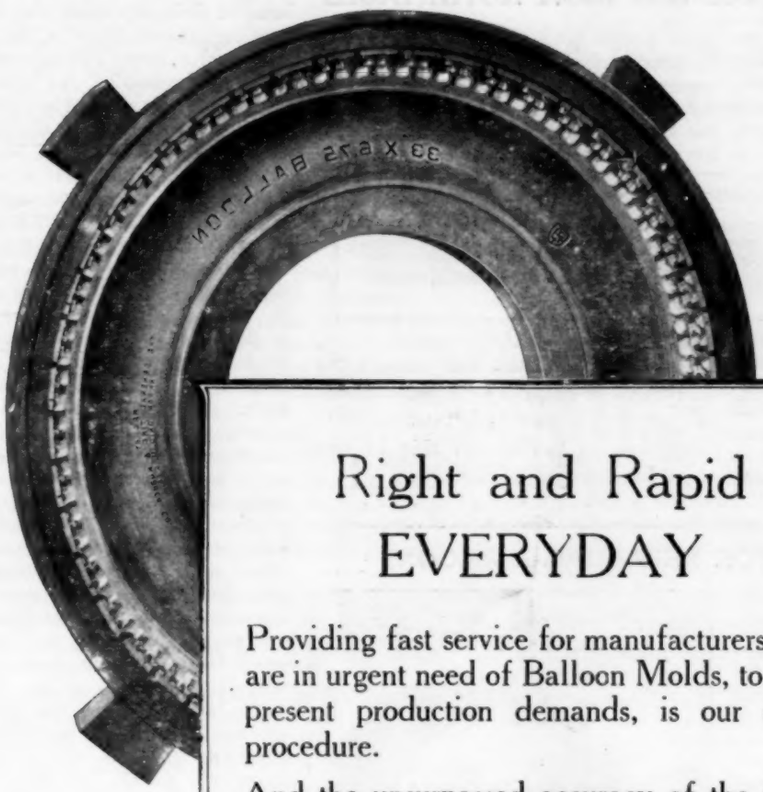
"Nevertheless, Dunlop's position in raw materials is such that, come what may regarding restriction, we are well able to maintain a competitive position having regard to the cost of raw material in the future."

The refinancing scheme was unanimously approved.

To Redeem Dunlop Bonds

The Mechanics and Metals National Bank of N. Y. City has issued a notice to holders of first mortgage and collateral trust sinking fund 7 per cent convertible gold bonds, Series A and B, of the Dunlop Tire and Rubber Corporation of America, Buffalo, N. Y., announcing that the company is calling and redeeming the bonds as of July 30, at the principal and a premium of 5 per cent.

The Series A bonds may be redeemed at the option of the holder at the N. Y. office of Lee, Higginson & Co., at 43 Exchange Place, or at their offices in Boston and Chicago. The Series B bonds are redeemable at the office of Higginson & Co., 80 Lombard Street, London. Interest on the bonds will cease on the redemption date and coupons maturing later will be void.



Right and Rapid EVERYDAY

Providing fast service for manufacturers who are in urgent need of Balloon Molds, to meet present production demands, is our daily procedure.

And the unsurpassed accuracy of the work turned out is the natural achievement of a well trained and equipped organization accustomed to handling a huge volume of such business.

Balloon Tire Molds.
High Pressure Tire Molds.

Molds For Any Article Of Hard or Soft Rubber.

Our Service Is Complete

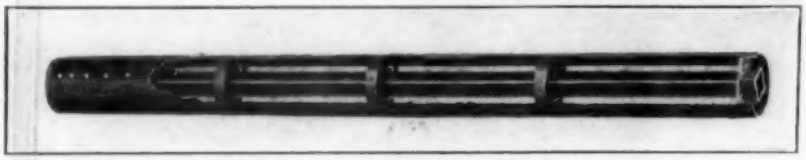
The Akron Standard Mold Co.

Akron *"The Established Measure of Value"* **Ohio**

FACTORY EQUIPMENT

ECONOMY CALENDER SHELL HAS MANY ADVANTAGES

The new Economy Calender Shell, recently announced to the industry by The Clyde E. Lowe Co., 2976 East 81st St., Cleveland, Ohio, is already meeting with much favor from rubber manufacturers. This shell, illustrated on this page, is

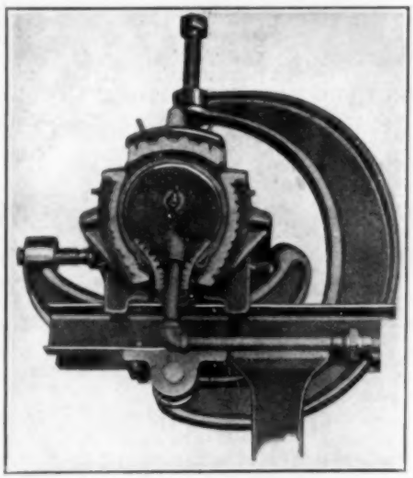


made with a head of malleable iron with a shaft opening flush with the outside edges, making the entrance of the shaft easy. The edge of the tube is flush with the rim of the head, thus preventing damage to the tube. The tube, which is continuous, is riveted to the head with large button head rivets and is made of 16 gauge auto body steel lapped and spot welded. The shaft guide square tube is also made from auto body steel, with the supporting spiders made of cast iron, having ventilating holes. The shaft guide is locked in the head.

Construction of the shell is such that the weight is reduced to a minimum and the strength is increased, thus making it both easy to handle and able to withstand hard usage.

NEW "TYRWELDER" FOR REPAIRING BALLOONS

There has just been announced to the repair trade a new unit called "Tyrwelder" for permanent repairs on balloon and truck tires to replace the usual sectional mold. The equipment consists of three plates as shown in the accompanying illustration which press on the tire, one from above and one from each side. These plates supply even pressure on all parts of the tire by the use of heavy steel clamps.



To each plate are attached studded rubber pads which fill inequalities in the tread, bead and sidewall of the tire being repaired. By means of an inside steam arm, the heat is confined to the inside of the tire thus preventing radiation from exposed surfaces and overcuring. It is simple to operate and is said to make a perfect repair. (The Akron Tyrwelder Co., Akron).

Obtain New Chemists

Announcements have been made by the Akron rubber concerns of the appointment of chemists as follows: H. B. Fritz, former chemistry instructor at the Ohio State university, with the Goodrich; Marion C. Reed, graduate of Ohio State last year, with the Goodrich research bureau; Homer L. Cupples, former Ohio with the Philadelphia Rubber Co., and State university chemistry instructor, George A. Watt, graduate of Massachusetts Tech. at the Firestone.

Rubber Planter Incorporated

Weeks Hanry & Co., Inc., New York City, planters of rubber, coffee and cocoa, has been chartered in New York State with a capital of 1000 shares no par value. S. M. Meyer, J. L. Kerbeck and J. H. Fox, Jr., 20 Exchange Place, are incorporators and subscribers.

To Introduce New Process

Bela Rechnitz, vice chairman of the Hungarian Rubber Works and chairman of the Hungarian Chamber of Commerce for Austria in Vienna, has arrived in New York to negotiate working agreements with American rubber interests for the use of new processes which, he says, will greatly reduce manufacturing costs.

Liner Patented

Abram E. Falor, John B. Dickson and Fred H. Amon, inventors of a nonsticking liner for sheet rubber recently granted U. S. Patent No. 1,543,283, have assigned the patent to the B. F. Goodrich Co., Akron. The liner has a sticky surface of the nature of unvulcanized rubber and is composed of woven fabric coated with a substance forming a nontacky glazed surface in contact with the sticky surface.

British Dunlop Refinancing

The directors of the British Dunlop Rubber Co. propose to effect a net saving of about £365,000 ($1,860,000) per year in respect of its prior changes, and those of American Dunlop, and to make an issue of Ordinary stock that will give the existing stockholders a bonus in the shape of a "right," which will be negotiable, to subscribe for one new share in respect of every four held, at 10s. ($2.50). The present market value of the existing shares is 16s. 6d. ($4.12).

This briefly is the scheme of refinancing which the company has under consideration. It has £6,000,000 ($30,000,000) of 8 per cent First Mortgage Debenture stock, one-half of which was issued in 1921 (the time of the crisis in the concern's affairs). The other half is deposited with the trustees for the bondholders of American Dunlop in respect of the parent company's guarantee of £1,000,000 ($5,000,000) and $11,000,000 of 7 per cent bonds issued by American Dunlop in 1922-23 for the purpose of financing its business. It is proposed to repay the whole of this £6,000,000 of Debenture stock—the issued half on Jan. 1 at 105 per cent plus accrued interest, the debentures being repayable on six months' notice from any interest date. American Dunlop's bonds are repayable at 105 per cent plus accrued interest on 30 days' notice. Such notice will be given on July 1.

The sum required for the repayment of these obligations is £6,504,806 ($32,524,030), towards which sinking fund payments to the amount of £279,121 ($1,395,605) have accumulated. It is proposed to make an issue of £5,000,000 ($25,000,000) of Debenture stock bearing 5½ per cent and having a sinking fund of 1 per cent, and to issue 3,750,000 of Ordinary shares of 6s. 8d. ($1.66) at a premium of 50 per cent—i. e. $2.50 per share. These issues will provide a sum more than sufficient to meet the balance of £6,225,685 ($31,128,425).

It is pointed out that the advantages of the new financing to the Preference shareholders will be that the fixed annual obligations of the company ranking in front of the Preference capital will be reduced by about $1,860,000 per year; that the charge in front of them will be reduced from $30,000,000 to $25,000,000; and that an additional £1,875,000 ($9,375,000) of Ordinary will rank behind the Preference.

This important refinancing scheme is testimony to the remarkable improvement in the credit and fortunes of the concern since its reorganization. Last year a net profit of over $7,500,000 was made. The directors, however, preferred to strengthen the reserves rather than hasten the resumption of ordinary dividends.

As we go to press we learn that the recent issue of 5½ per cent Debenture stock of the Dunlop Rubber Co., Ltd., of England was heavily oversubscribed upon the day of issue, and the list of applications had to be closed unexpectedly early.

High-Priced Rubber Will Cause Greater Use of Reclaimed Rubber

Author Gives Price Levels at Which Reclaimed Supplants Crude Production, Consumption, and Extent of Use of Reclaimed Rubber

By **E. G. Holt**

Assistant Chief, Rubber Division, Dept. of Commerce

THE manufacture of reclaimed rubber is a considerable industry in the United States, and the present crude-rubber situation suggests several questions.

To what extent can reclaimed rubber be used in place of crude rubber? What relation does the use of reclaimed rubber bear to the price of crude rubber? At what price for crude rubber is reclaimed rubber used to the greatest extent practicable? About how much reclaimed rubber is produced annually in America, and what is the present production capacity of reclaimed-rubber manufacturing plants in the United States? Finally, if the consumption of reclaimed bears a definite relation to the price of crude rubber, how much may our crude-rubber requirements be reduced by increased use of reclaimed, with crude-rubber prices at above $0.40 per pound

Exact answers to these questions are perhaps not available, but statistics which have been compiled since 1919 by the Rubber Association of America (Inc.) are worthy of special consideration.

Consumption of Crude and Reclaimed Rubber

When the Stevenson rubber export restriction scheme became effective in British Colonies the Rubber Association of America gathered data from United States and Canada rubber manufacturers covering the consumption of crude rubber and reclaimed rubber in America during the years 1919 to 1922, inclusive. The figures ahe as follows:

Consumption of crude and reclaimed rubber in the United States and Canada

Year	Crude rubber *Long tons*	Reclaimed rubber *Long tons*	Ratio reclaimed to crude *Per cent*
1919	202,303	73,535	36.4
1920	196,270	75,297	38.4
1921	169,308	41,351	24.4
1922	283,271	54,458	19.2

United States Consumption of Crude Rubber and Production and Shipments of Reclaimed Rubber

For 1921, 1922, and 1923 the domestic production only of reclaimed rubber was reported; since that time the stocks, production and shipments of reclaimed rubber have been reported quarterly. The following table shows the reported consumption of crude rubber and production of reclaimed rubber during each period, and the shipments of reclaimed rubber since the beginning of 1924:

Rubber Association reports on United States crude rubber consumption and reclaimed rubber production and shipments

Period	Crude rubber consumed *Long tons*	Reclaimed rubber—Produced *Long tons*	Reclaimed rubber—Shipped *Long tons*	Ratio of reclaimed to crude—Produced *Per cent*	Ratio of reclaimed to crude—Shipped *Per cent*
1921:					
First half	58,919	14,968	*	25.4	*
Second half	95,369	19,188	*	20.0	*
1922:					
First half	114,623	25,824	*	22.5	*
Second half	139,560	27,964	*	20.0	*
1923:					
First quarter	87,098	19,168	*	22.0	*
Second quarter	80,544	15,017	*	18.6	*
Third quarter	50,059	15,108	*	30.2	*
Fourth quarter	57,255	20,241	*	35.3	*
1924:					
First quarter	74,848	21,834	18,828	29.2	25.1
Second quarter	68,107	12,297	11,285	18.1	16.6
Third quarter	75,432	16,678	15,231	22.1	20.2
Fourth quarter	83,391	25,263	20,864	30.3	25 0
1925:					
First quarter	87,642	25,353	22,922	28.9	26:2

*Not reported.

Consumption of Crude and Reclaimed Rubber—Prices

The table below combines the Rubber Association report for the United States and Canada for the years 1919 to 1922 with the reports for the United States alone for 1923 and 1924. For 1923, the "production" of reclaimed rubber as shown above is used in the column for consumption of reclaimed, and for 1924 "shipments" is the figure employed since it is probably nearer the actual consumption.

The absolute consumption of reclaimed rubber in 1924 appears to have been greater than for any previous year, although the relative use of reclaimed as compared to crude was at a low level throughout most of the year.

The average market price per pound of crude rubber (ribbed smoked sheet) is also shown, and in addition the average value per pound of crude rubber imported into the United States, as computed from official import statistics.

Consumption of crude and reclaimed rubber

Year	Crude *Long tons*	Reclaimed *Long tons*	Ratio of reclaimed to crude *Per cent*	Average market price of ribbed smoked sheet	Average value per pound of crude imports
1919	202,303	73,535	36.4	$0.487	$0.40
1920	196,270	75,297	38.4	0.363	0.43
1921	169,308	41,351	24.4	0.163	0.18
1922	283,271	54,458	19.2	0.170	0.15
1923	274,956	69,534	25.3	0.296	0.27
1924	301,778	76,072	21.9	0.260	0.24

Relation Between Use of Reclaimed Rubber and Value of Crude Rubber

Charts may be drawn to compare the ratio of reclaimed rubber used in recent years with either the average market price of ribbed smoked sheet or the average value per pound of crude rubber imported into the United States. The latter figure has been chosen as representing more nearly the cost of rubber to the average large manufacturer, and also because the trend shown by this chart is believed to be more nearly correct.

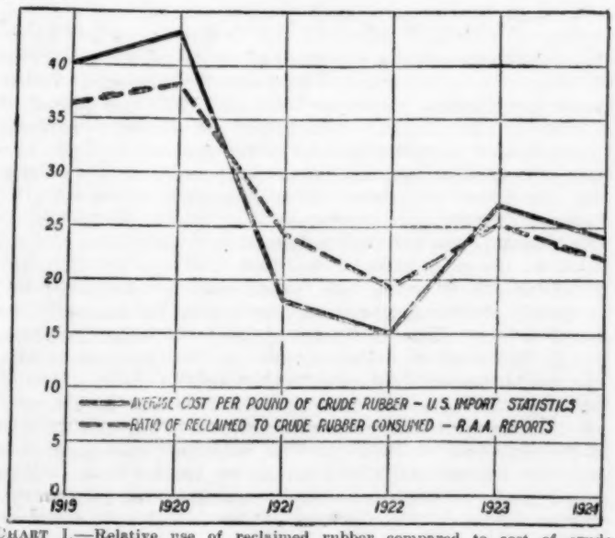


CHART 1.—Relative use of reclaimed rubber compared to cost of crude rubber

The table and chart show that when crude rubber was above $0.40 per pound in 1919 and 1920 from 36 to 38 per cent as much reclaimed rubber was consumed as of crude rubber. With low-priced crude rubber in 1921 and 1922, crude rubber was used to an increased extent in place of reclaimed, and the ratio of reclaimed to crude fell below 20 per cent. An average market price of $0.296 in 1923 brought about a larger use of reclaimed rubber, which held up fairly well in 1924 in spite of a slightly lower average cost for crude.

Factors Affecting the Use of Reclaimed Rubber

There are many different standard grades of reclaimed rubber for use in the manufacture of different rubber products. For certain purposes it is frequently said that reclaimed rubber is fully equal if not superior to crude rubber; for such purposes reclaimed rubber finds a steady use regardless of the price of crude rubber. For certain other purposes, where reclaimed and crude rubber may be used interchangeably, reclaimed rubber of standard but more expensive grades finds a considerably increased use with crude rubber prices between $0.30 and $0.35, and with crude rubber prices at higher levels it becomes economically worth while to develop special grades of reclaimed rubber to use in place of crude for products which ordinarily require the use of crude rubber almost altogether.

Furthermore, the percentage of reclaimed utilized in the production of a specific product may be varied between certain limits, as the price of crude rubber fluctuates and renders such variations desirable. Every large rubber manufacturer has at least two sets of formulas for use in preparing the compounds for his products, and a high price for crude rubber results in the use of the formulas calling for increased amounts of reclaimed rubber in place of crude.

Consumption of Reclaimed as Compared with Crude

There is a fairly definite relation between the price of crude rubber and the use of reclaimed. It appears from available data for the years 1919 to 1924 that reclaimed rubber has never been used four-tenths as much as crude, and its use has never fallen much below two-tenths as much as crude. Between these points its use has fluctuated according to crude-rubber prices. With crude rubber slightly above $0.40 per pound, the use of reclaimed rubber may amount to about 37.5 per cent as much as crude; with $0.15 rubber, only 20 per cent reclaimed is used; when crude rubber is around $0.30 per pound over an extended period about one-fourth as much reclaimed as crude is used. Apparently it becomes economical to employ considerably increased quantities of reclaimed rubber when the price is between $0.30 and $0.35, and at $0.35 probably about one-third as much reclaimed as crude would be consumed.

Fluctuation of Reclaimed Rubber in Accordance with Price of Crude

In order to show in a more detailed manner how the production of reclaimed rubber in the United States has fluctuated in accordance with the price of crude rubber since 1919 the Chart II is presented, based on the combined United States and Canada report for 1919 and 1920, and periodical reports of the Rubber Association of America covering United States manufacturers alone for semiannual and quarterly periods in subsequent years, compared with the average cost per pound of crude rubber imported into the United States during the various periods.

In Chart II the ratio of reclaimed to crude rubber is computed on the same basis as in Chart I, except for 1921 and 1922, for which years, the "production" of reclaimed was necessarily used in computation, semi-annual statistics of "consumption" or "shipments" of reclaimed not being available. It will be noted that the relative use of reclaimed rubber increased considerably during the last half of 1923, following higher prices for crude rubber in the first half of the year, fell off thereafter with the declining price of the raw product in the first half of 1924, and has constantly increased since that time in conformity with advancing rubber prices. High priced crude rubber causes an increased use of rubber substitutes.

Reclaimed Rubber Production Capacity

The reports of the Rubber Association of America show a total production of 76,072 long tons of reclaimed rubber in the United States in 1924. How close this comes to the production capacity of the manufacturers can not be accurately stated, but it is generally understood that reclaimers were not operating at anywhere near capacity in 1924, and a reasonable estimate of the production capacity of present equipment is between 125,000 and 150,000 tons a year. Doubtless plant extensions could rapidly increase the latter figure.

Increased Use of Substitutes Indicated

During 1924, the United States imported about 328,000 long tons of rubber; the average cost per pound, according to import statistics, was around $0.24; the ratio of reclaimed

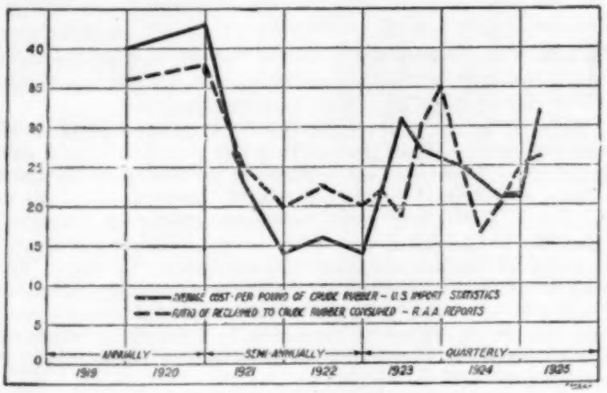


CHART II.—Relative use of reclaimed rubber compared to cost of crude rubber

rubber consumption to crude was about 22 per cent. At prevailing prices, there is bound to be an increased use of substitutes. If we would have used say 400,000 tons of crude and 100,000 tons of reclaimed rubber, or one-fourth as much reclaimed as crude, with the price around $0.30, we are much more likely to use 375,000 tons of crude and 125,000 tons of reclaimed rubber or one-third as much reclaimed as crude at prevailing prices, and there is a further increase possible in the relative use of reclaimed rubber which might reduce our crude rubber requirements for the year another 10,000 tons.

Continued high prices for crude rubber over period of years would undoubtedly stimulate the use of reclaimed rubber still further. The reclaimed rubber of today is considerably improved as compared with the product in 1919, and there is a possibility that the use of reclaimed rubber could be increased to 45 or 50 per cent as much as crude rubber. Such stimulation would result only from a fairly long period of high crude rubber prices, because of plant extensions necessary for manufacturers of reclaimed rubber, and because of experimentation and readjustment of formulas for compounds on the part of manufacturers of rubber products.

Book Review

ESTABLISHING SALES QUOTAS, Management Methods No. 2. Issued by Policyholders' Service Bureau, Metropolitan Life Insurance Co.

In preparing the data on sales quotas, the compilers of this booklet based their conclusions on a survey of two and one-half million enterprises, classified into ninety-seven divisions.

The method of establishing sales quotas was arrived at by allowing each twenty-five dollar sale to constitute a point, taking a total number of points at the beginning of the year as the company quota and using the business record of the preceding years as a 50 per cent factor. One-half of the quota was computed on the basis of products already in use, because of the possibility of additional sales. The distribution of the quota was effected by allotting one-half among the agencies at a pro-rata basis, according to the points of value of the product already in use, and the other half among the agencies on the basis of the number of business enterprises in each district.

South American Rubber Prospects

INTEREST in all lesser-known rubber fields has been stimulated by the high price of plantation rubber which is expected to go still higher and which has spurred American rubber executives to seek other sources for their supplies. At the present time, due in part to the fact that the Department of Commerce will soon issue the report of its survey in South America, there has been much interest evinced in the Amazon Valley, as a field for future development.

According to E. A. Palmgren, an engineer who has spent twenty years in South and Central America, the possibilities of further rubber development in this area are very good. In a statement recently issued, Mr. Palmgren furnished the following information on the Matto-Grosso State in Brazil, Para, Eastern Peru and Ecuador, Southern Columbia and Venezuela:

The standard among the latex producing trees is the "Heavea Braziliensis," (Euphorbiacees) or "Goma elastica." This Hevea furnishes the rubber known as "Para," which is found in abundance in those regions from 11° below to about 6° above the Equator. It grows to a height of from 30 to 60 feet with a diameter of from 3 to 6 feet, principally in the fluvial region of the river Amazon's principal western affluents, or river Madeira-Mamore, Purus River—Acre Territory with its tributaries, Machado, Jamary, Jaci Parana, Ribeirao, etc. and Abuna, Negro, Orton, Madre de Dios and Beni in Bolivia.

There are about 21 specimens of rubber trees in this territory, among which are the "Caucho," (Castilloa elastica), the "Tapuru" (Sapium), the "Mangabeira," (Hancornia speciosa), etc., and various specimens of "balata," analagous to Gutta Percha and of the "Mimusopa" trees "Massaranduba," "Muriapiranga" and "Maparajuba."

Cost of Rubber

The cost of rubber is now about 20 cents per pound, delivered on board steamer, river port. The export duty charged by the Amazon State is 15% on invoices, and to that is to be added freight, etc., to the United States. The export duty charged by the Matto-Grosso State is 8% on invoices.

Formerly most of the Amazon rubber was marketed through the port Belem do Para City. Since 1900, however, all rubber collected in that State must be shipped through or from its capital city, Manaos, 1,000 miles up the river Amazon from the Port of Para. Manaos has an excellent harbor, with floating piers and navigation is carried on between this river port and the United States and Europe.

Labor is Plentiful

Much discussion and doubt are current in regard to the available labor for the enlargment of the Amazonian rubber industry. There has never been any shortage of laborers for the rubber industry, nor is there any now. Proof of this was shown during the world's rubber boom, about 15 years ago, when thousands of men migrated from all neighboring Northern states to work in the rubber forests and this will certainly be repeated at any time a move is made in the direction of a large rubber development.

The daily wage scale is from 10,000 to 20,000 mil reis per day (about $0.90 and $1.75). The wage question, however, does not largely affect the Amazon Valley's rubber working, for the prevailing system of paying the men is a certain price per pound, according to the current market price of rubber when the men bring out their season's rubber crop from the forest.

Climate and Temperature

The climate is warm, but generally healthy. There are but two seasons, winter and summer, or, wet and dry seasons, with little variation of temperature, excepting on the higher lands. The summer commences in June and lasts until December, when winter appears. The thermometer seldom rises above 87° in the afternoon and falls to about 76° during the night. The mornings and evenings are pleasantly cool and there is generally a shower and a light breeze in the afternoon.

Location of Properties Described in This Article Denoted by Arrow. Distance From Para is about 1500 Miles and from Manaos about 600 Miles

Approximate Costs and Earnings

Taking a forest area of 5,000 square miles (3,200,000 acres) as a basis for a rubber operation, the first year capital outlay will be about $3,000,000, which covers expenses of opening up of rubber roads, dwellings, stores, tools, launches, barges, canoes, administration, etc., besides expenses for the employment of about 5,000 to 6,000 rubber gatherers.

Out of this amount about $1,200,000 is returned by the men for advances of outfits, etc., made to them for the whole gathering season, including operators profit. The first delivery of the rubber collection will amount to at least 5,000 tons, eleven million pounds of pure dry rubber, and about two million pounds of "Sernamby" rubber.

These figures are calculated on a rubber yield on only one-third of the existing trees, because it is convenient to tap only one-third yearly, letting the others recuperate.

The average number of trees per acre is 7 to 20 in the Acre territory, Madeira Valley and other regions, whereas the above calculation allows only 3 trees to an acre.

Mr. Palmgren adds further that there is proposed the formation of a South American Development Company to acquire two properties from the State of Amazon and Brazil, comprising an area of 1,193 sq. miles or about 764,000 acres. In this territory is to be found, in addition to rubber, oil, nuts, gold, etc. The properties are known as *Boa-Experanca*, comprising an area of 679,592 acres with a frontage of 90 miles on the Madeira and Mamore Rivers, and *Campinas*, an area of 84,316 acres on the opposite side of the Madeira, with a river frontage of 26 miles. Ample railroads, power and labor are available or can be easily provided, thus making this territory suitable for cultivation on a large scale. Further details of this property can be obtained by anyone interested by writing Mr. E. A. Palmgren, care of this paper.

VULCANIZATION & ACCELERATORS

By Andre Dubosc

PART II (*CONTINUED*)

Natural and Mineral Accelerators

Resinous Matters Present in Crude Rubber Have an Accelerating Action on Vulcanization but Cause a Reduction of Mechanical Resistance in Vulcanized Products, Excepting the Percentage of Elongation

THESE resinous substances seem to be nothing more than addition products, while the resins that are described by Peachey appear to be substitution products for in the course of their formation the evolution of carbonic acid gas may be detected. Furthermore, in accordance with the observations that have been made by Terry on this matter, the content of oxygen in oxidized rubber at the extent of a prolonged period of exposure of the rubber oxide to the action of the atmosphere can attain a maximum of twenty-seven per cent. This would appear to correspond to formulae which resembles those that were developed by Peachey very closely. The Peachey formulae corresponds to oxides that contain in the neighborhood of twenty-nine per cent of oxygen.

The presence of these oxides of rubber in a virgin rubber can be readily detected with the aid of a very simple reaction which was described by William Thomson. This test consists in subjecting the rubber to the action of a solution of methylene blue in ethyl alcohol. An alcoholic solution of magenta red may also be employed. If there is any oxide of rubber present, then the color will be fixed by it and an evolution of oxygen will be observed.

Effect of Resins on Oxidation

It has also been remarked that in these oxidations the transformation of the rubber gum into the oxide takes place more easily when the content of natural resins in the rubber is low. In other words the natural resinous matter that is present in the virgin rubber play the part of anti-oxidizers or protectors against oxidation. This therefore explains the fact that in the vulcanization of a rubber gum which contains a large proportion of these resinous substances, the process seems at times to be retarded by the presence of these impurities, particularly, if substances which are rich in oxygen, as for example litharge or magnesia are added to the rubber mixture.

The natural resins in the rubber then have a decided retarding action on the oxidation of the rubber, and when the rubber mixture lacks oxygen, as a natural fact, then only a part of the sulphur that is contained in it can be converted into sulphurous acid, while the resins themselves change another part into suphuretted hydrogen. Then inasmuch as sufficient sulphurous acid or sulphur dioxide is lacking in the rubber mixture, there cannot be formed in the rubber mass a satisfactory proportion of colloidal sulphur and as a result of this the vulcanization of the rubber is retarded. But if a substance that contains a considerable proportion of oxygen is added to the rubber mixtures, as, for example, litharge or magnesia, sulphurous acid is immediately formed, the cycle of the reactions is resumed and the rate of vulcanization is accelerated.

Thus it is now clear that the resinous matters in the rubber play the part of vulcanization accelerators, a fact which was not apparent at first superficial observation. The experiments and investigations carried out in the Delft laboratories appear to confirm the opinions which have just been expressed by the writer. These experiments were made by Van Henrn. A resume of these studies is given in the following:

The Van Henrn Experiments

"Opinion on whether or not the presence of natural resinous matter in the raw rubber retards or accelerates vulcanization has been very diversified up to the present day. Lothar Weber has stated that when the resinous matters are removed from the raw rubber, the gum can no longer be vulcanized." Sidney Morgan who was the first to call attention to the role that is played by the natural rubber resins in protecting the rubber against oxidation has shown himself to be entirely in concordance with the Weber theory.

Van Henrn undertook the investigation, which is being described herein, according to Stevens, with the idea in mind of determining just how accurate this theory might be. He took four samples of the same Hevea crepe, each sample weighing three hundred grams, and he subjected them to extraction with acetone for a period of four days, renewing the acetone used in the extraction each day. The solvent recovered from the extraction was then distilled and the resinous matters that remained behind were then taken up with benzine. In order to separate the insoluble matter that is mixed with the resins, the benzine solution was filtered and the filtrate was thereafter evaporated on a water bath. A brownish colored syrupy liquor was obtained in this manner, which on cooling quickly yielded a magma of crystals.

The extraction was prolonged on a certain proportion of the original rubber sample and it was found that it was possible in this way to extract an additional amount of resinous matter from the rubber. In this manner it was found that nine grams of resinous matter could be extracted from three hundred grams of the rubber, which amounts to 3.3 per cent figured on the weight of the original rubber sample.

Composition of the Mixtures

The rubber mixtures, which were to be subjected to vulcanization, were then made by adding 7.5 per cent of sulphur.

The first mixture, which is designated by mixture No. 1, contains a definite proportion of the rubber gum which had undergone the extraction process, and to which there had been added a certain percentage of the resinous matters isolated from the rubber gum.

Mixture No. 2 contained just the rubber gum and no resinous matter or sulphur, while mixture No. 4 was made from the rubber that had been subjected to extraction with acetone and to which there had been added in the first place the resinous matter obtained in the extraction process, and in the second place another quantity of the same substance derived

from a sample which had the same weight as the first one. Hence this sample contained a proportion of resinous matter which was twice as great as that which was contained in an ordinary rubber gum.

The fourth sample was made just from the natural rubber.

All the samples of rubber were then vulcanized and after this had taken place the samples of vulcanized rubber were tested in a Schopper machine, so as to determine their physical characteristics. The results that were obtained from these experiments are given in the following tabulation:

	I	II	III	IV
	Rubber with original resin	Rubber without resin	Rubber with double the amount of resin	Natural rubber
Rupturing load in kilograms per square centimeter	85	99	77.5	101
Elongation in percentage	924	881	981	955

The results obtained with the rubber samples I, II and III may now be compared in order to arrive at a conclusion on the effect of resinous matters in the rubber in regard to the vulcanization of the rubber gum. All three samples of rubber, that is numbers I, II and III, have been subjected to extraction with acetone and the only difference between these rubbers is in their content of resinous matter. If for example the quantity of resinous matter that is extracted from the original rubber by means of acetone is designated as a, then the three rubbers will contain the following proportions of resins: II, zero grams, I a grams and III 2a grams. The rupturing load for these three rubber samples are 99 kilograms per square centimeter for rubber sample number II, 85 for number I and 77.5 for number III.

The conclusion that Van Henrn derives from this investigation is that the presence of resinous matters in the rubber has the effect of reducing the mechanical resistance of the vulcanized products that are obtained from it.

Effect of Acetone and Temperature

The effect of the acetone and of the temperature at which the extraction was carried out may be established from a comparison of samples numbers I and IV. These samples both contain the same amount of resinous matter. The resistance to rupture of the vulcanized articles made from these rubbers is lowered from 101 kilograms per square centimeter to 85 kilograms per square centimeter, or 11 units and this due only to the combination of acetone and temperature.

(However Van Henrn fails to take into consideration the other substances that are present in the rubber and that are extracted when it is subjected to treatment with acetone. For example the oxides of rubber might be mentioned as an example of such substances and these are present in the rubber sample number IV but are not found in rubber sample number I).

Then again if a comparison is made of the results obtained with the rubber samples II and IV, it will be seen that the mechanical resistance of the vulcanized products is decreased 16 kilograms per square centimeter. This is due to the double action of the acetone and heat. But it is known that the resistance of the vulcanized product is lowered 14 kilograms per square centimeter by the absence of all resinous matter in the rubber, and therefore the actual reduction in the mechanical strength of the vulcanized product which may be assigned as being due to the heat to which the rubber is subjected during extraction is only two kilograms per square centimeter.

In the investigation that was carried out by Stevens on this subject, the extraction of the rubber samples was carried out at low temperatures with the result that these effects of heat, which are clear from the experiments made by Van Henrn, were not noticed as such. Thus Stevens was able to secure a certain increase in the resistance of the vulcanized rubber to rupture by the addition of an excess proportion of resinous matter but a reduction in this physical characteristic as well.

The results that were obtained by Van Henrn are in accord with those that were secured by Stevens.

One thing that Van Henrn neglected to do was to determine the coefficient of vulcanization and similarly the establishment of the rate at which the vulcanization of the rubber took place. Van Rossem undertook to make these determinations and he stated at the beginning of his investigations, which covered the examination of 215 samples of first latex crepe and 101 samples of first latex sheets, that there seemed to exist some relationship between the percentage of resinous matter present in the original rubber and the speed at which the vulcanization was accomplished. Both these characteristics seemed to increase at the same time. This relationship may be expressed in the form of the following equation:

$$r = 0.154 \pm 0.037.$$

Although this coefficient is of small magnitude, nevertheless it exists just the same and it shows clearly that the resinous matter that is present in rubber acts as a veritable accelerator of vulcanization.

If then the results that Van Henrn obtained are examined again, it will be seen that an addition of resinous matter to the rubber has the effect of lowering the resistance to rupture of the vulcanized product and increasing the percentage elongation. Van Iterson made a series of tests with the idea in mind of establishing the manner in which the presence of resinous matter in the original virgin rubber can effect the mechanical properties of the vulcanized products obtained from it. He made a comparison of the four diagrams on the percentage elongation of the various samples of rubber, numbers I, II, III and IV, which were used by Van Henrn. The following conclusions were derived from this study:

Conclusions

In the first place when the resinous matter is removed from the rubber gum by extraction with acetone a change was induced in the rubber in the sense that in order to obtain the same degree of elongation it is necessary to use more force. Thus the rubber became stiffer, which is in accord with the observations made by Stevens on the same subject.

Then when resinous matter which had been extracted from the rubber was added to it again, the same curve diagram was obtained as with the original rubber, but with this difference, namely, that the breaking point of the vulcanized rubber sample is located somewhat further down on the curve.

Finally the addition of twice the proportion of the original resinous matters extracted from the rubber by acetone gives a vulcanized rubber which has a much greater percentage elongation. In other words this means that the rubber has become more supple.

Hence from the numerous tests that have been made on this matter, it may be concluded that the resinous matters, present in the original virgin rubber, have an accelerating action on the combination of sulphur and rubber, and on the other hand they cause a certain retrogression in the mechanical properties of the vulcanized products, with the exception of the percentage elongation.

The tests carried out on this subject at the Imperial Institute at London, in fact all the tests made in these laboratories, tests carried out to a certain extent on all types of rubbers which are met with in the rubber industry throughout the world, have shown that these conclusions are correct. Hence the more the percentage of resinous matter in the rubber gum the more quickly it will vulcanize but the less will be the mechanical resistance of the vulcanized product and the less marked its physical characteristics. One can therefore say that the resinous matter in the rubber is a natural accelerator of vulcanization, but on the other hand it is not a vitalizer of rubber.

The effect that the protein matters contained in the rubber gum have on the mechanism of the vulcanization, although of a different character than that of the resinous matters, nevertheless is no less important. The tests carried out on this subject, that is, on the influence of the protein impurities in the rubber on vulcanization, have led to the conclusion that the more of these nitrogeneous substances there are in the rubber, the better are the physical properties of the vulcanized rubber.

It is therefore the profound study of the proteins and their transformation products that led Spence, even before Bayer and the German chemists, to the discovery of acceleration of vulcanization.

In the next installment M. Dubosc will tell of general characteristics of proteins.—The Editor.

EDITOR'S REVIEW DESK

Books **Trade Catalogs** **Articles**

EFFECT OF TIRE RESISTANCE ON FUEL CONSUMPTION. Technologic Papers of the Bureau of Standards, No. 283. By W. L. Holt and P. L. Wormeley, physicists.

Discussing the relative merits of the low and high pressure tires, the compilers of this paper hold the opinion that the increased cushioning of balloon tires is secured at the expense of rolling resistance. The greater riding comfort which the balloon tire affords and its protection to the various parts of the car against shock, with a consequent better durability, are found, however, to offset the disadvantage of increased resistance.

On an average it appears that a higher rolling resistance will result from the use of balloon tires, but the difference between the two types is so small that any variation in fuel consumption will be correspondingly small.

* * *

RUBBER—A NEW GOLD IN WORLD FINANCE. By Silas Bent. *New York Times*, May 3.

America's rubber bill last year to Great Britain was $185,000,000. This year it will be $400,000,000. Great Britain's payment to the United States this year, as a partial settlement of her war debt, will be $160,600,000. From its rank among the leading commodities of the world, rubber assumes an important place in the question of international debt, for Winston Churchill, Chancellor of the Exchequor, has said that rubber exports to the United States may be used by his Government to liquidate the war debt.

CLASSIFIED ADVERTISING

10 Cents a word, minimum charge $2.00, payable in advance. Address replies to box numbers, care THE RUBBER AGE, 225 Fourth Ave., New York.

Want to locate with small or medium sized mechanical goods factory. 10 years experience, all departments, thoroughly understand compounding and factory management. Will go anywhere, age 29 years. Box 408 THE RUBBER AGE.

WE BUY FOR SPOT CASH—Surplus and Odd Lots of Chemicals, Oils, Dyes, intermediates, solvents, gums, glues, waxes, and any item of a chemical nature. Republic Chemical Corp., 303 Pearl Street, New York, N. Y.

PATENT RIGHTS FOR SALE—Rubber Pipe cover (Dipped product). Simple, economical, air-tight device. Eliminates odors and renders pipe fire-proof in pocket. Has splendid market. If interested send for unfinished sample. Box 409. THE RUBBER AGE.

Free
Mailing Lists
Will help you increase sales
Send for FREE catalog giving counts and prices on thousands of classified names of your best prospective customers—National, State and Local—Individuals, Professions, Business Concerns.
99% Guaranteed by refund of 5¢ each
ROSS-Gould Co. 503 N. 10th St. St. Louis

Whether or not this plan is carried out, and no definite sign has yet been given that it will, the facts that the proproposal brings to light are of great interest. A product first used in 1770 to eradicate pencil marks and developed, through the discovery of vulcanization by Charles Goodyear, in 1839 has become so necessary in the daily life of two of the foremost countries in the world that it takes the place in financial negotiations once occupied by gold.

* * *

UNITED STATES GOVERNMENT MASTER SPECIFICATION FOR COTTON RUBBER LINED FIRE HOSE (COUPLINGS AND GASKETS). Federal Specifications Board Specification No. 386.

The specification covers the purchase of hose for fire protection purposes. Single-jacketed hose is recommended for use at fire hydrants, standpipes and similar places. Double and triple jacketed hose is found preferable for use on pumping engines and in places where service conditions require the additional protection against wear afforded by extra cotton jackets.

Tests for 3-foot and 47-foot hose are given with tables covering hydrostatic test pressures and requirements for hydrostatic tests. Failure of either length of hose to meet all the requirements specified for the hydrostatic tests is considered cause for rejection. Physical and chemical laboratory tests are also recommended for hose passing the hydrostatic.

* * *

A NEW CUSHION TYRE WITH SEGMENTAL TREAD. Published in *The Commercial Motor*, March 17.

Sectomatic is the name given to a new tire introduced into England. Consisting of an endless solid band molded with a cushion tread of separately air-cooled segments, it is designed to limit the application of the vehicle upon a section of the tire where it contacts the road surface. In that it does not permit the formation of a traction wave, distortion being prevented by the slanting grooves that separate the tire segments, it is said to be superior to other types. Experiments with the tire have so far been limited to motor buses, where it was found to afford greater comfort, lengthen the life of the chassis, prevent splashing and lessen skidding.

* * *

A CAR MANUFACTUREE'S EXPERIENCES WITH BALLOON TIRES. By E. A. DeWaters, Chief Engineer, Buick Motor Co., Flint, Mich. Published in the *Journal of the Society of Automotive Engineers* for March.

IN the summer of 1922 the Buick Company began experimenting with balloon tires. The first tires to be tested, being four-ply and 32 x 6.20 in. in size, produced a galloping action that was sufficient to prejudice the company's engineers aganst them, and the tests were discontinued. In addition to the galloping effect, other difficulties encountered included those usually present in steering, the development of wheel shimmying to a serious degree, the lack of proper clearance for external brakes because of the small 20 in. wheels, the excessively rapid wear of the tire tread, and the greater susceptibility to puncture. Leaks because of the pinching of the inner tubes also occurred.

When, later, a set of 5.25-in. tires was tried on a smaller car, the galloping was noticeably less but punctures were more numerous than was the case with high-pressure tires. In another set of 32 x 6.20-in. tires, but of six instead of four plies, galloping was still present, but the durability of the tires was increased. Low resistance to skidding was apparent because of the configuration of the tread, which was of the circumferential-rib variety. It was obvious that

(*Continued on Page* 250)

The Market Place

WHERE TO OBTAIN

Machinery, fabrics, chemicals, compounding ingredients, crude and reclaimed rubber, consulting chemical and engineering services, etc.

ACCELERATORS—X L O and Diphenyl Guanidine.

Dovan Chemical Corp.

30 Church St. New York

FOLLOW-UP

Your mail efforts by a listing in this section. It will repay you the slight cost.

CASES—Fibre construction, insure satisfactory shipping results. Send for sample.

Brooklyn Fibre Syndicate, Inc.

Decatur St. & Irving Ave.
Brooklyn, N. Y.

ACCELERATORS — Two new accelerators: Vulcone and Di-ortho-tolylguanidine.

E. I. du Pont de Nemours & Co., Inc.

Pyrotuff's Dept. Sales Div.

Wilmington, Del.

CALENDERS—Embossing, for artificial leather, oil cloth etc.

Textile-Finishing Machinery Co.

83 Exchange Place, Providence, R. I.

CATALPO— A colloidal and gritless clay now being used as a reinforcing pigment in number one treads, solids, and tubes.

Moore & Munger

33 Rector Street, New York City — Second National Bldg., Akron, Ohio

ACCELERATORS— Every lot is tested before shipment and a written guarantee of quality furnished.

Roessler & Hasslacher Chem. Co.

709 Sixth Ave. N. Y. City

CARBON BLACK—*Micronex* the world's standard gas black, universally known as the "King of Rubber Pigments."

Binney & Smith Co.

41 East 42nd St. New York City

CHEMICALS

Refined Pine Tar
(Moisture Free)

Petrolatum--Burgundy Pitch.

E. L. Bullock & Sons, Inc.

99 John St. New York City

ACCELERATORS—A19, A7, Thiocarbanilid.

The RUBBER SERVICE Laboratories Co.

611 Peoples Savings & Trust Bldg.
Akron Ohio

CARBON BLACK

nine grades for the rubber industry.

Godfrey L. Cabot, Inc.

938-942 Old South Bldg. Boston
611 Metropolitan Bldg. Akron

CHEMICALS and compounding ingredients for the rubber trade.

Harshaw, Fuller & Goodwin Co.

Cleveland, Ohio

ANTIMONY Pentasulphide, golden and crimson, very fine, pure.

Rare Metal Products Co.

Tyler Patterson Co.

Belleville, N. J. Cleveland, Ohio

CARBON BLACK—*Aerfloted* Arrow Black for rubber compounding. Standard for grit-free uniformity.

J. M. Huber, Inc.

130 West 42nd St. New York

CHEMICALS and compounding ingredients; Clay, Whiting, Accelerators, Mineral Rubber.

R. T. Vanderbilt Co.

50 East 42nd St. New York City

ASBESTINE—Specially prepared for use in Rubber. Send for liberal working sample.

SOLE PRODUCERS

International Pulp Co.

41 Park Row, New York City

CARBON BLACK — *Black Goose Brand*—free from grit and impurities and of high tensile strength.

Union Power Co., Inc.

Carbon Black Division

Shreveport, La.

CHEMICALS and pigments for the rubber trade. Complete stocks carried.

Wishnick-Tumpeer Chemical Co.

Chicago Cleveland Brooklyn

BEAD CABLES— National Flat Woven and Pratt Patent Bead Cables.

National Standard Co.

Niles, Mich.

CARBONEX — Increases strength and durability of any compound while reducing the cost.

The Barrett Company

40 Rector St., N. Y. City

CLAY — COTT'N BLOSS'M

Brand. Absolutely uniform and gritless. Send for five-pound laboratory sample and prices.

The American Pigment Co.

Ravenna, Ohio

THE MARKET PLACE Section Continued on Second Page Following.

MARKETS

Cottons and Fabrics

NEW YORK, July 1, 1925

Estimated crop conditions, from returns compiled by *The Journal of Commerce* in twelve states, show an average of 69.6 per cent of normal, as compared with 75 per cent a month ago and 63.9 per cent at the same time last year. On this basis a yield of 13,383,177 bales is expected, 716,363 bales less than indications of a month ago. The continued drought in Texas, resulting in the non-planting of large tracts and the failure of portions of planted territory to germinate, makes the prospects in that State doubtful, although in Central Texas the crop has made progress. The weevil situation is improved, although the outlook contains its share of uncertainty.

Forecasts from other sources look for a condition ranging from 73 to 74 per cent of normal with an average of all private crop reports to date of 73.9 per cent of normal.

The market showed a healthier tendency during the last few days than it had manifested for several days previous. A revival, of substantial proportions, in the drygoods trade, with the betterment spreading thrugh staples, yarns, fancies and lightweights, has been a contributing factor to this strengthening. Discussion of mill curtailment has lessened with the improvement and there seems little likelihood of this during the summer.

The Government's report, which will be shortly issued, has tended to hold bullish activity in bounds and has also produced a careful attitude on the part of the bear elements. Temporary reactions have been noted, due to drought and the liquidating of the July position. This latter factor led to a large circulation of notices, which were mainly taken up by exporters. This caused a recovery in the July position and practically the elimination of the discount under October.

That the weevil activity will figure in the calculations of the Government is certain, but no estimate can be undertaken of what the allowance may be. Other states besides Texas have suffered from lack of rains and this will influence the determination of averages over the central and eastern divisions of the belt.

The future trend of prices will be governed in part by the distribution of the crop, and until the latter moves freely selling will be speculative. Predictions as to the purchasing power of Europe are optimistic, and world consumption is likely to be greater than in 1924.

New York Cotton Prices

	Opening	Highest	Lowest	Closing	June 15 Close
July	24.16	24.17	23.93	23.03	23.43
October	24.13	24.15	23.93	23.97	23.11
December	24.20	24.20	24.00	24.07	23.27
January	23.58	23.60	23.45	23.50	22.82
March	23.85	23.91	23.75	23.82	23.06

TIRE FABRICS

Manufacturers of balloon tires have recently manifested a tendency to increase casings from four plies to six and a consequent heavier consumption of tire yarn and fabrics has been decidedly noticeable. That this is not a temporary condition is evidenced by the enthusiasm with which certain large producers are featuring this change.

The fabric trade is endeavoring to cover its fourth quarter fabric requirements.

CORD FABRICS

Combed	Sakellarides		Nominal	
Combed	Peeler	lb.	Nominal	
Carded	Peeler		.49 @	.51
Combed	Egyptian uppers	lb.	.67 @	.68
Carded	Egyptian uppers	lb.	.62 @	.63

SQUARE WOVEN

17¼-ounce	Egyptian uppers, combed	lb.	Nominal	
17¼-ounce	Egyptian uppers, carded	lb.	.62 @	.65
17¼-ounce	Sakellarides, combed	lb.	Nominal	
17¼-ounce	Peeler, carded	lb.	.48 @	.50

Ducks—There is a demand for bleached twill and a speeding up of deliveries has been one of the outstanding facts in this section. This goods is principally used for golf knickers. The hot weather has caused heavy sales of awning stripes and army duck and there has been a slight improvment in exports.

Burlaps—The crop report to be issued by the Indian Government has caused the local market to hesitate in its activities. Prices have varied little. The Calcutta market has atempted to forecast the Government report on the basis of returns from a few districts. Some trading took place during the closing phases of the market, but it generally was inactive.

SHEETINGS

40-inch	2.50-yard	yd.	.15 @	—	
40-inch	2.85-yard	yd.	.12⅝ @	.12¾	
40-inch	3.15-yard	yd.	.13½ @	—	
40-inch	3.60-yard	yd.	.10¾ @	—	
40-inch	3.75-yard	yd.	.09¾ @	.09⅞	
40-inch	4.25-yard	yd.	.08¾ @	.08⅞	

DUCKS

Belting	lb.	.41 @	.42
Hose	lb.	.41 @	.42
Enameling	lb.	.43 @	.49
Shoe Ducks	lb.	.49 @	.50
Single filling	lb.	.19 @	.21
Double filling	lb.	.21½ @	.22½

BURLAPS
(Carload Lots)

7½-ounce	40-inch	7.40 @	7.45	
8 -ounce	40-inch	7.50 @	7.55	
10 ounce	40-inch	9.55 @	—	
10½-ounce	40-inch	9.75 @	—	

J. H. LANE & CO.

Tire Fabrics Cord Fabrics

Enameling Duck Drill Sheeting

Osnaburg and Special Constructions

250 W. 57 Street, NEW YORK 223 West Jackson Boulevard, CHICAGO

ALL THE LEADERS

Are represented in this section. Purchasing agents can rely on the concerns listed as thoroughly reliable in every way.

The Market Place

CRUDE RUBBER — All Grades. Washed - Dried - Milled. *Send us Your Inquiries.*
Gibraltar Rubber Corp.
West New York, N. J.

FABRICS—Tire fabrics of every description, Sea Island, Egyptians, Peelers.
Taylor, Armitage & Eagles, Inc.
120 Broadway New York

LINERS — PROCESSED
For Various Rubber Stocks
The Cleveland Liner & Mfg. Co.
5508 Maurice Ave., Cleveland, O.

DIPHENYLGUANIDINE
Aero Brand, product of the highest purity from dependable source of supply.
American Cyanamid Co.
511 Fifth Ave. New York City.

FABRICS—Stockinets, Jersey Cloth and Special Fabrics for the Rubber Industry.
U. S. Knitting Co., Inc,
Pawtucket, R. I.

MANDRELS--CIRCULAR
and Economy Calender Shells
Prompt Service—Let us quote you.
The Clyde E. Lowe Co.
2976 E. 81st St., Cleveland, Ohio

DRY KILN—for drying crude rubber and chemicals—Hunter Process.
Carrier Engineering Corporation
750 Frelinghuysen Ave. Newark, N. J.

FACTICE—Prevents blooming, makes colors fast and a smoother batch.
Stamford Rubber Supply Co.
Stamford, Conn.

MOLDS AND CORES—
Tire building equipment; general machine work.
The Akron Equipment Co.
Akron, Ohio

FABRICS—Tire fabrics, Egyptian—Peeler, Karded and Combed, Cord and Square.
Cabarrus Cotton Mills
(Cannon Mills, Inc.)
55 Worth St. New York
327 S. La Salle St. Chicago

GUAYULE—"Duro" Brand washed and dried ready for compounding.
Continental Rubber Co.
120 Broadway New York

MOLDS & CORES—Tire building machines; tire finishing stands; tubing machines; hydraulic presses.
The Akron Standard Mold Co.
Akron, Ohio

FABRICS—Spots and Contracts: Tire Fabrics, Enameling ducks, Tube Wrapping Tapes.
H. Frank Jones
395 Broadway New York City

HARD RUBBER, quality hard rubber goods of every description.
Vulcanized Rubber Co.
251 Fourth Ave. New York City

MOLDS & CORES—for automobile tires; general machine work.
Kuhlke Machine Co.
Akron, Ohio

FABRICS—Tire fabrics—coarse builders, chafers, breakers in all grades.
New England Southern Mills
LAWRENCE & CO.
24 Thomas St. New York
Boston, Philadelphia, Chicago, St. Louis, San Francisco

HEEL BURRS—with central holes; flat and cupped.
J. H. Sessions & Son
279 Riverside Ave. Bristol, Conn.

RECLAIMED RUBBER—
Uniformity, reliability, cleanliness.
Pequanoc Rubber Co.
Butler, N. J.

FABRICS—Tire, cords, enameling ducks, drills, sheetings, osnaburgs.
J. H. Lane & Co.
250 West 57th St. New York City

RUBBER FACTORIES
use vast quantities of raw materials and equipment. Let the industry know how well you can serve it through a listing in this section.

RECLAIMED RUBBER—
for all purposes.
Rubber Regenerating Co.
Naugatuck, Conn.

THE MARKET PLACE Section Continued on Second Page Following.

Reclaimed Rubber

NEW YORK, July 1, 1925

Reclaimers are still operating 24 hr. to keep up with the demand which continues in good force. Continued high prices for crude and the scarcity of spot rubber has brought increases in practically all grades of reclaimed but according to some factors in the industry, prices are still too low. Increased capacity of reclaimers, now under contemplation, cannot materialize soon enough to ease prices and advances are looked for again. Prices follow:

Friction (Uncured)			
No. 1	lb.	.45 @	.50
No. 2	lb.	.35 @	.40
High Tensile Black			
Super-Reclaim No. 1	lb.	.24 @	.25
" " No. 2	lb.	.15 @	.16
Shoe			
Unwashed	lb.	.09 @	.09½
Washed	lb.	.12¾ @	.13
Tube			
No. 1 (Floating)	lb.	.18 @	.18½
No. 2 (Compounded)	lb.	.15 @	.16
Tires			
Black unwashed	lb.	.09¼ @	.09¾
Black, washed	lb.	.11 @	.11½
Dark Gray	lb.	.11½ @	.11¾
Light Gray	lb.	.13¼ @	.13½
White	lb.	.16 @	.16¼
Truck	lb.	.09¼ @	.09½
Miscellaneous			
Mechanical Blends	lb.	.07½ @	.08½
Red, High Grade	lb.	.16 @	.16½

Scrap Rubber

NEW YORK, July 1, 1925

Scrap dealers are holding off in the hopes of higher prices and are not anxious to release stocks. Higher prices from reclaimers are being obtained for all grades with the demand continuing strongly. There is no shortage of stocks and unless crude rubber breaks, scrap will demand higher prices very shortly. Prices follow:

Auto tire peelings		.01⅞ @	.01½
Standard White auto	ton	25.00 @	28.00
Mixed auto	ton	20.00 @	22.00
Bicycle tires	tons	10.00 @	12.00
Clean solid truck tires		38.00 @	40.00
Boots and shoes		.01⅞ @	.02
Arctics, untrimmed		.01 @	.01¼
Arctics, trimmed		.01⅝ @	.01½
Inner tubes, No. 1		.07 @	.07¼
Inner tubes, compounded		.05½ @	.05¾
Inner tubes, red		.04¼ @	.04½
Battery jars, clean hard rubber		.01 @	.01⅛
Air Brake Hose	ton	16.00 @	18.00
Rubber hose	ton	10.00 @	12.00

Crude Rubber

NEW YORK, July 1, 1925

After reaching an asking price of 88 @ 89 cents on June 26 and 27 for ribbed sheets, spot, the market has eased off in the last few days with business being done at 81 @ 82 this morning. Yesterday's quotations were about two cents higher and the slight break in price has brought many buyers into the open. July was done at 80½, and August at 77.

Our last report in the middle of June quoted spot ribbed sheets at 72½ which was about 5 cents under prices of several days previously. Since that time, however, the market has been stronger. Factory buyers have been holding off on spots but have shown interest in Oct.-Nov.-Dec. positions. During this period London was quiet but firm with evidences of a stronger Oct.-Dec. price. The week ended with 76¼, with little buying interest.

The week bginning June 22 opened with a steady advance which during the course of the day reached the 80 cent level. Noting the rising tendency, buyers came into the market more freely during the next few days and many sales were made on Wednesday at 86 cents for June rubber. Small arrivals and a firm London market served to keep up the market at this level. The end of the week, however, showed a welcome easiness and buyers withdrew in the hopes of still lower prices. Their hopes were short-lived when a rise from 83½ to 88 cents took place on the 26th. Stocks were short and sellers were in some instances holding out for 90 cents. Positions beyond August were obtainable at real concessions with October-December quoted at 69.

This week opened firm with London stocks at 5107 tons as compared with 5397 tons last week. Late in the afternoon on Monday the tone was easier with spots available at 86 cents. Easiness has prevailed during the balance of the week up to this writing, with more sellers than buyers in evidence in London. Local buyers are being attracted by the market at present levels and are expected to commit themselves for July and August rubber.

For the time being, the market is expected to remain easy in expectation of a curtailment in production of tire factories. Most of these factories have ample stocks for July and August and there is little likelihood of their being interested in more rubber unless there is a decided break in prices. Today's prices are as follows:

NEW YORK MARKET

Plantations—			
Ribbed Smoked Sheets			
Spot	.81 @	.82	
July	.80 @	.81	
August	.77 @	—	
September	.73 @	.74	
Oct.-Dec.	.68 @	.69	
January-March	.65 @	.66	
First Latex, crepe spot	.80 @	.81	
Amber Crepe, No. 2, spot	.76 @	—	
" " No. 3,	.75 @	—	
" " No. 4,	.74 @	—	
Brown Crepe, Rolled	.71 @	—	
" " Clean, thin	.75 @	—	
" " Specky	.74 @	—	
Pontianac—			
Bangermassin	Nominal		
Palembang	Nominal		
Prime Pressed	Nominal		
Sarawak	Nominal		
Paras—			
Up-river Fine	.77 @	—	
" Medium	.67 @	—	
" Coarse	.59 @	—	
Islands, fine	.70 @	—	
Madeira Fine	.77 @	—	
Acre Bolivian, fine	.78 @	—	
Tapajos, fine	.74 @	—	
Cut Beni Bolivian, fine	.77 @	—	
Caucho Ball—			
Upper, shipment	.56 @	—	
Centrals—			
Central, scrap, prime	.55 @	—	
Corinto, scrap	.56 @	—	
Esmeraldo, sausage	.56 @	—	
Guayule, w and d	.51 @	—	
Africans—			
Benguela, No. 2	Nominal		
Congo, upper, black	Nominal		
" " red	Nominal		
Kassai, Prime Red	Nominal		
Balata—			
Block, Columbia	.53 @	—	
" Cuidad	.56 @	—	
Surinam, sheet	.79 @	—	
Gutta Percha—			
Siak	.18 @	—	
Red Macassar	2.80 @	3.00	
Chicle—			
Mexican, Yucatan	.65 @	—	

LONDON MARKET

Standard Ribbed Smoked Sheets—	
Spot	38¾d
July	38¼
August	37¼
September	25
Oct.-December	32¾

SINGAPORE MARKET

Standard Ribbed Smoked Sheets—	
Spot	36 d
July	36
August-Sept.	35
Oct.-December	31¾

TIRE FABRICS

OF EVERY DESCRIPTION

TAYLOR, ARMITAGE & EAGLES Inc.

Equitable Building, 120 Broadway, New York

SEA ISLANDS EGYPTIANS PEELERS

FABRICS TO SPECIFICATION

AMERICAN COTTON FABRIC CORPORATION

The Market Place

RECLAIMED RUBBER
A standardized grade for every requirement.
U. S. Rubber Reclaiming Co., Inc.
100 E. 42nd St., New York, N. Y.
"42 Years Serving the Industry Solely as Reclaimers"

SOLVENT RECOVERY EQUIPMENT
50 to 90 Per Cent Recovery
Spadone Machine Co., Inc.
15 Park Row New York
Exclusive Selling Agents for
BENZINE CONDENSATION CO.

TIRE BUILDING EQUIPMENT
MOLDS & CORES
The Akron Rubber Mold & Machine Co.
Akron, Ohio

RED OXIDE—A special grinding, guaranteed uniform in color and quality.
Joseph A. McNulty
114 Liberty St. New York City

SOLVENTS — Accurately refined for the rubber industry.
Hartol Products Corporation
192 Market St. Newark, N. J.

TRIMMERS—OVERFLOW
For Heels, Soles and Mechanical Rubber Goods.
Designers of Special Machinery
Arthur Jackson Wills Co.,
North Brookfield Mass.

RUBBER—Crude and scrap, all grades.
H. Muehlstein & Co.
Liggett Bldg. New York
Akron, Chicago, Boston, Hoboken

STRIP CUTTING MACHINES
For cutting all rubber, composition and plain or impregnated fabrics.
Cameron Machine Co.
61 Poplar St., Brooklyn, N. Y.

USED MACHINERY
Mills, Calenders, Grinders, Washers
New and Old Rubber Scrap
Rubber Cloth Remnants
M. Norton & Co.
Locust St. Medford, Mass.

RUBBER SCRAP
Always Buying and Selling
Rubber Waste, Cured and Uncured, Hard Rubber, Balata, Gutta Percha.
HERMAN WEBER
Newark & Jackson Sts., Hoboken, N. J.

SULPHUR—*"Tire"* Brand Superfine; *"Tube"* Brand Velvet; quality Sulphur for the rubber trade.
Stauffer Chemical Co.,
of Texas.
Scanlon Bldg. Houston, Texas
San Francisco, Cal. Chauncey, N. Y.

VALVES—Tire valves, caps, insides, pressure gauges.
A. Schrader's Son, Inc.
Brooklyn, N. Y.

RUBBER SUBSTITUTES
White, brown and black.
Carter Bell Mfg. Co.
150 Nassau St. New York

TAR—PINE, RETORT, KILN
All grades for the rubber manufacturer.
Pensacola Tar and Turpentine Co.
Gull Point, Florida

WHITING & PARIS WHITE
manufactured from *Genuine English Chalk* and *Cliffstone*—no adulterations.
Southwark Mfg. Co.
Camden New Jersey

RUBBER SUBSTITUTES
All grades — Samples furnished.
Manufactured by
The Westminster Chemical Co.
531 South Peoria St. Chicago

TECHNOLOGIST — Testing, formulae, costs, litigation, experimental work on all classes of rubber products.
Fred'k. J. Maywald, F.C.S.
5 William St., Belleville, N. J.

ZINC OXIDES—A Z O, the Super Zinc.
American Zinc Sales Co.
P. O. Box 1428 Columbus, O.
Pierce Bldg. St. Louis
Prudence Bldg. New York

SANITARY GOODS — Dress Shields, Reducing Garments, Sheetings, Aprons, Bathing Caps, etc.
I. B. Kleinert Rubber Co.
485 Fifth Ave., N. Y. City

THERMOMETERS—Recording, controlling temperature and pressure controllers.
American Schaeffer & Budenberg Corp.
Berry & South Fifth Sts., Brooklyn

ZINC OXIDES — Including KADOX and "Albalith."
The New Jersey Zinc Sales Company
New York Pittsburgh Chicago
Cleveland San Francisco

CHEMICALS & COMPOUNDING INGREDIENTS

Accelerators — Colors — M.R. — Compounding Ingredients
Softeners — Vulcanizing Ingredients — Rubber Substitutes

NEW YORK, July 1, 1925—Following an excellent turnover during the month of June, it can hardly be expected that this month will be as good but from orders already received a number of chemical and compounding ingredients manufacturers claim that they expect to be kept busy all month. There has been little indication of a let-up among tire manufacturers and demands for chemicals have shown little abatement. The industry as a whole showed interest in the advent of two new clays (White Goose and Cott'n Bloss'm), an improvement in another clay (Catalpo), the introduction of the new line of DuPont colors and the Aero Brand D. P. G. Prices have been firm with very few changes. Quotations are as follows:

ACCELERATORS

Organic			
Aldehyde ammonia, crystals	lb.	$ .90	@ .93
Aniline oil, drums	lb.	.17	@ .17½
Di-Ortho-Tolylguanidine	lb.	1.10	@ 1.13
Diphenylguanidine	lb.	.95	@ .98
Ethylidene aniline	lb.	.60	@ .65
Excellerex	lb.	.35	@ .40
Formaldehyde-Aniline	lb.	.40	@ .42½
Hexamethylene-tetramine	lb.	.80	@ .82½
Paraphenylenediamine	lb.	1.25	@ 1.30
Piperidine-Piperidyldithio-Carbamate	lb.	5.00	@ —
Super-Sulphur No. 1	lb.	.50	@ —
Super-Sulphur No. 2	lb.	.18	@ .30
Tensilac, No. 41	lb.	.65	@ —
Tuads	lb.	4.50	@ 6.00
Thiocarbanilide, kegs	lb.	.24	@ .25
Triphenylguanidine	lb.	.70	@ .75
Vulcone	lb.	.75	@ .79
Zimate	lb.	5.00	@ —
Inorganic			
Lead, sublimed blue	lb.	.10	@ .11
Lead, white	lb.	.10½	@ —
Litharge, domestic	lb.	.11½	@ —
Lime, superfine	lb.	.01½	@ .02
Magnesia, calcined,			
light	lb.	.24	@ .25
extra light	lb.	.40	@ .45
heavy	lb.	.04	@ .06½

COLORS

Blacks			
Arrow "Aerfloted"	lb.	.07	@ .11
Bone Black	lb.	.05½	@ .09
Carbon "	lb.	.07	@ .11
Drop "	lb.	.06	@ .14
Ivory "	lb.	.12	@ .45
Lamp "	lb.	.12	@ .40
Micronex	lb.	.08	@ .12
Thermatomic carbon	lb.	.04	@ .08
Blues			
Cobalt	lb.	.21	@ .26
Prussian	lb.	.35	@ .37
Ultramarine	lb.	.08	@ .35
Browns			
Iron oxide	lb.	.02¼	@ .06¼
Sienna, Italian	lb.	.04	@ .14
Umber, Turkey	lb.	.04	@ .06
Vandyke, domestic	lb.	.03	@ .03½
Greens			
Chrome, light	lb.	.29	@ .30
medium	lb.	.30	@ .31
dark	lb.	.32	@ .34
commercial	lb.	.10	@ .10½
Chromium Oxide, bbl.	lb.	.37	@ .39
Reds			
Antimony			
crimson, 15/17 F.S.	lb.	.43	@ .45
sulphur free	lb.	.45	@ —
golden, 15/17 F.S.	lb.	.17	@ —
pentasulphide,			
pure,	lb.	.35	@ .38
15/17 F.S.	lb.	.33	@ .36
red sulph. 15-17F.S.	lb.	.16	@ .20
Indian English	lb.	.11	@ .15
Oximony	lb.	.13½	@ —
Para toner	lb.	.90	@ 1.00
commercial	lb.	.13½	@ .14½
Red oxide, reduced	lb.	.04	@ .12
pure	lb.	.12	@ .14
Toluidine toner	lb.	1.95	@ 2.10
Venetian red	lb.	.01½	@ .05
Vermillion, quicksilver,			
English	lb.	1.40	@ 1.50
domestic	lb.	.15	@ .25
Whites			
Albalith	lb.	.06⅝	@ .06⅝
Aluminum bronze		.60	@ 1.25
Lithopone, Akcolith	lb.	.06	@ .06½
Lithopone Azolith	lb.	.06½	@ .06⅝
Zinc Oxide—American Process			
XX red	lb.	.07¾	@ .08½
Kadox,			
black label, kegs	lb.	.10⅝	@ .11⅛
blue " " "		.09⅝	@ .10⅛
red " " "		.08⅝	@ .09⅛
American Azo:			
ZZZ (lead free)	lb.	.07¾	@ .08¼
ZZ (under 5% leaded)	lb.	.07	@ .07½
Z (8-10% leaded)	lb.	.06¾	@ .07¼
Zinc Oxide—French Process			
White seal	lb.	.12	@ —
Green seal	lb.	.10¾	@ —
Red seal	lb.	.09¾	@ —
Yellows			
Chrome, light		.18	@ .18½
dark and medium		.18	@ .18½
Cadmium Sulphide	lb.	2.00	@ 2.50
Ocher, French medium	lb.	.02½	@ .02⅝
domestic	lb.	.01½	@ .02½

COMPOUNDING INGREDIENTS

Aluminum Flake			
(f.o.b. plant)	ton	21.85	@ 24.50
hydrate lights	lb.	.17	@ .18
Ammonia carbonate	lb.	.13	@ .15
Asbestine	ton	18.00	@ 20.00
Barium carbonate	ton	54.00	@ 56.00
Barium Dust	lb.	.05	@ .06
Barytes southern off-color, ton		12.00	@ 18.00
Western prime white ton		22.00	@ 23.00
imported	ton	30.00	@ 36.00
Basofor	lb.	.04½	@ —
Blanc fixe, dry f.o.b. works	lb.	.04	@ .04¼
Carrara filler	lb.	.01¾	@ .02
Chalk, precip., extra light	lb.	.04½	@ .05
heavy	lb.	.03¼	@ .04
Clay, China, domestic	ton	13.00	@ 22.00
Catalpo (fact.)	ton	35.00	@ 40.00
Dixie	ton	20.00	@ 35.00
Blue Ridge, Dark	ton	9.00	@ —
" " Light	ton	12.00	@ —
Langford	ton	12.00	@ 22.00
Glues, extra white	lb.	.21	@ .29
medium white	lb.	.18	@ .24
cabinet	lb.	.15	@ .23
cabinet low grade	lb.	.14	@ .17
common bone	lb.	.11	@ .14
Graphite flake, bbls.	lb.	.06½	@ .12
Lump	lb.	.04	@ .07
Infusorial earth, powdered	ton	23.00	@ 25.00
bolted	ton	15.00	@ 20.00
Liquid latex	gal.	2.50	@ —
Magnesia, carbonate	lb.	.08¼	@ .09
Mica, powdered	ton	65.00	@ 80.00
Rotten Stone (powdered)	lb.	.02½	@ .04½
Soapstone, powdered	ton	15.00	@ 22.00
Starch, powdered	cwt.	4.07	@ 4.55
Talc, domestic	ton	16.00	@ 18.00
Terra Alba	cwt.	1.25	@ 2.00
Tripoli, white	lb.	.02	@ .02¼
Whiting, commercial	cwt.	1.00	@ 1.15
gilder's bolted	cwt.	1.25	@ 1.35
English cliffstone	cwt.	1.50	@ —
Paris white American	cwt.	1.50	@ 1.75
Quaker	ton	13.00	@ 15.00
Sussex	ton	8.00	@ 10.00
Wood pulp XXX	ton	35.00	@ —
" " X	ton	25.00	@ —

MINERAL RUBBER

Genasco (factory)	ton	50.00	@ 52.00
Granulated M.R.	ton	35.00	@ 45.00
Hydrocarbon, Hard	ton	29.00	@ 35.00
Hydrocarbon, Soft	ton	29.00	@ 35.00
320/340 M.P. hydrocarbon (c. l. factory)	ton	47.00	@ 52.00
300/310 M.P. hydrocarbon (c. l. factory)	ton	42.00	@ 47.00
Syntpro, granulated, M.R. (factory)	ton	55.00	@ 70.00

SOFTENERS

Acids			
Acetic, 28%	cwt.	3.38	@ —
Cresylic, 97%	gal.	.59	@ .64
95%		.57	@ .60
Muriatic, 20%	cwt.	.90	@ 1.00
Nitric, 36 degrees	cwt.	4.25	@ 4.50
Sulphuric, 60 degrees	ton	10.00	@ 11.00
66 degrees	ton	14.00	@ 15.00
Tartaric, crystals	lb.	.29	@ —
Alkalies			
Caustic soda, 76%	cwt.	3.60	@ —
Soda ash, 58% C.L.	cwt.	1.43	@ 1.45½
Oils			
Castor, No. 3, bbls.	lb.	.16¼	@ —
Corn, crude, bbls.	lb.	.12½	@ —
refined	lb.	.13½	@ —
Cootonseed, crude		.09¾	@ —
Glycerine C.P. drums	lb.	.19	@ .19½
Linseed, Raw C.L. bbl.	gal.	1.20	@ —
Palm, Niger	lb.	.09¾	@ —
Lagos	lb.	.09¾	@ —
Peanut, domestic, crude	lb.	.13	@ —
Petrolatum, white		.12	@ .12¼
amber		.03⅞	@ .04
dark amber	lb.	.03⅝	@ .03¾
Pine, steam distilled	lb.	.65	@ .66
Rapeseed, refined	gal.	1.00	@ —
blown	gal.	1.05	@ —
Rosin, first rectified	gal.	.58	@ .60
second rectified	gal.	.61	@ .63
Soya Bean, crude		.13¼	@ .13½
Tar, commercial	gal.	.30	@ .32
Resins and Pitches			
Parra M.R.	lb.	.06	@ .07
Tar Retort	bbl.	15.00	@ —
kiln burned	bbl.	15.50	@ —
Pitch, Burgundy	lb.	.05	@ .06½
coal tar	gal.	.05½	@ .06
pine	bbl.	6.00	@ 6.50
Rosin, grade K	bbl.	11.25	@ —
Solvents			
Alcohol, denatured,			
No. 1 bbls.	gal.	.52½	@ .56½
Benzol, 90%	gal.	.22	@ —
pure		.24	@ —
Carbon bisulphide	lb.	.06	@ .07
tetrachloride	lb.	.06¾	@ .08
Dimethylaniline	lb.	.48	@ .50
Motor gasoline,			
steel bbls.	gal.	.22	@ —
Naptha, V. M. & P.	gal.	.21	@ —
Toluene	gal.	.26	@ —
Turpentine, spirits	gal.	1.01	@ 1.02
wood	gal.	.85	@ .90
Waxes			
Bayberry	lb.	.21	@ .22
Beeswax	lb.	.55	@ .65
Carnauba, No. 1	lb.	.38	@ .40
Ceresin, white	lb.	.10	@ .11
Montan, crude	lb.	.06	@ .06½
Ozokerite, black	lb.	.24	@ .25
green	lb.	.26	@ .30
ParaffineWhite, A.M.P.	lb.	.05⅛	@ .05¼
Yellow A.M.P.	lb.	.05⅜	@ .05½
Sweet wax	lb.	.12	@ —

SUBSTITUTES

Black	lb.	.08	@ .15
White	lb.	.09½	@ .16½
Brown	lb.	.10	@ .15
Brown factice	lb.	.09	@ .18
White factice	lb.	.09½	@ .16½

VULCANIZING INGREDIENTS

Black hyposulphite	lb.	.18	@ .20
Ethyl Chloride, Cyl.	lb.	.55	@ —
" " Drums	lb.	.45	@ —
Sulphur Chloride (drums)	lb.	.04½	@ .06
Sulphur flour			
Commercial bags	cwt.	1.35	@ 1.70
" bbls.	cwt.	1.70	@ —
Superfine, bags	cwt.	2.20	@ 2.50
" bbls.	cwt.	2.60	@ 2.90
100% pure, refined,			
bags	cwt.	2.35	@ 2.65
bbls.	cwt.	2.60	@ 2.90

Index to Advertisers

Akron Rubber Mold & Machine Co..... 247
Akron Equipment Co..... 245
Akron Standard Mold Co..... 235 - 245
American Cyanamid Co..... 228 - 245
American Pigment Co..... 223 - 243
American Schaeffer & Budenberg Corp..... 247
American Zinc Sales Co..... 227 - 247
Barrett Co., The..... 243
Binney & Smith Co..... 222 - 243
Brooklyn Fibre Syndicate..... 243
Bullock & Sons, Inc., E. L..... 243
Cabarrus Cotton Mills..... 230 - 245
Cabot & Co., Godfrey L..... 243
Cameron Machine Co..... 233 - 247
Carrier Engineering Corp..... 231 - 245
Carter-Bell Manufacturing Co., The.... 233 - 247
Classified Advertising..... 242
Cleveland Liner & Mfg. Co..... 245 - 251
Continental Rubber Co..... 224 - 245
Dovan Chemical Co..... 243
duPont de Nemours & Co., E. I..... 243
Farmer & Sons, Leopold..... 230
Gibraltar Rubber Corporation..... 245
Harshaw, Fuller & Goodwin Co..... 231 - 243
Hartol Products Co..... 247
Huber, J. M., Inc..... 225 - 243
International Pulp Co..... 224 - 243
Jones, H. Frank..... 245
Kleinert Rubber Co., I. B..... 226 - 247
Kuhlke Machine Co..... 226 - 245
Lane, J. H., & Co..... 244 - 245
Lawrence & Co..... 245
Lowe Co., Clyde E..... 220 - 245
Maywald, Fred'k J..... 247
McNulty, Joseph A..... 247
Moore & Munger..... 243
Muehlstein & Co., Inc., H..... 232 - 247
National Standard Co..... 226 - 243
New Jersey Zinc Co..... 247 - 252
Norton & Co., M..... 247
Pensacola Tar & Rubber Co..... 232 - 247
Pequanoc Rubber Co..... 220 - 245
Rare Metals Products Co..... 243
Ross Gould Co..... 242
Roessler & Hasslacher Chemical Co., The..... 243
Rubber Regenerating Co..... 218 - 245
Rubber Service Laboratories Co., The..... 243
Schrader's, A., Sons, Inc..... 247
Sessions & Sons, J. H..... 233 - 245
Southwark Mfg. Co..... 247
Spadone Machine Co..... 229 - 247
Stamford Rubber Supply Co..... 226 - 245
Stauffer Chemical Co..... 232 - 247
Taylor, Armitage & Eagles Co., Inc..... 245 - 246
Textile-Finishing Machinery Co., The.... 224 - 243
Union Power Co., Inc..... 243
U. S. Knitting Co..... 245
U. S. Rubber Reclaiming Co..... 221 - 247
Vanderbilt, R. T., Co..... Front Cover - 243
Vulcanized Rubber Co., The..... 224 - 245
Weber, Herman..... 247
Westminster Chemical Co..... 229 - 247
Wills, Arthur Jackson..... 247 - 249
Wishnick-Tumpeer Chemical Co..... 243
The Market Place..... 243 - 245 - 247

This Weeks News

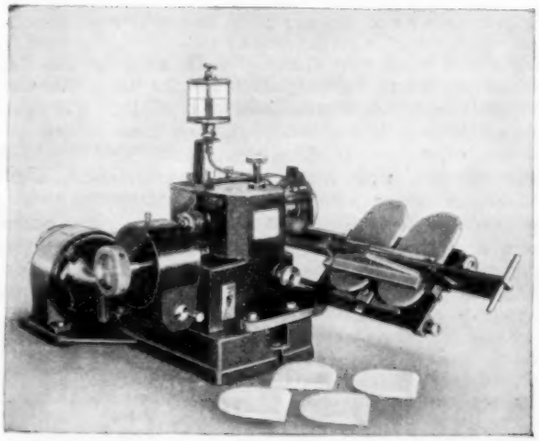
- *this week*

Every rubber executive or engineer—no matter how busy he is—will read news of the industry. That's why he reads every issue of THE RUBBER AGE. He knows that the news found there is news of this week—not of last month or last year.

Firms selling their products to rubber factories can, of course, profit by this great reader interest.

THE RUBBER AGE, 225 Fourth Ave., N. Y.

Increase Your Crepe Sole Profits



WILLS CREPE HEEL BEVELING MACHINE

Produces four perfect wedge heels with one operation and turns the waste wedge cut into heels. Sample heels and complete details furnished upon application.

SOLD EXCLUSIVELY BY

Arthur Jackson Wills Company

Established 1915

NORTH BROOKFIELD, MASS., U. S. A.

EDITOR'S REVIEW DESK

(*Continued from Page 242*)

defects in the tires must be eliminated before satisfactory results could be expected.

A decision was reached to adopt sizes of balloon tires that would meet the observed conditions and to make the sizes approximately those of the high-pressure tires previously used. After seven test-cars had been driven a total of 1,500,000 casing-miles, these sizes were made standard.

As an excessive number of punctures in four-ply tires was found to result from the pinching of the inner tubes in ruts, when the roads were frozen, it was decided that the rear wheels, because of the greater load carried and the absorption of driving strains, demanded a heavier casing. Increasing the number of plies from four to five in the 31 x 4.95-in. size of the tire practically doubled the mileage performance, as did also increasing the number from four to six in the 32 x 5.77-in. size. A remaining trouble, namely, excessive treadwear on the outer edges of the front-wheel tires, was remedied by raising the air-pressure about 10 per cent.

The conclusions reached are: (a) that large section balloon tires increase the resistance to steering, particularly at the curb, increase the tendency toward shimmying at the higher speeds, set-up a disagreeable galloping action, and increase the liability to blowouts because of the pinching of the inner tubes by deep hard ruts; (b) making a compromise by reducing the cross-section of the tire and raising the air-pressure will eliminate the tendency to gallop; (c) four plies are sufficient to protect the front wheels against punctures and blow-outs; (d) more than four plies are needed on the rear wheels because of the greater wheel-loads carried and the absorption of driving strains; and (e) from the standpoint of durability, tire pressures should be maintained at the figures recommended.

• • •

UNITED STATES GOVERNMENT MASTER SPECIFICATION FOR OIL SUCTION AND DISCHARGE HOSE. Circular of the Bureau of Standards No. 209.

This specification was officially distributed by the Federal Specifications Board Sept. 1, 1923, for the use of the departments and independent establishments of the Government. Single grade hose is recommended, free from defects in material and workmanship. The hose construction should be of a helix of wire, with cotton duck reinforcement, a rubber layer, outside rubber cover and nipples attached with clamps. Inspection and tests should be made at the place of manufacture, a section of hose 12 inches long and one foot of unfrictioned duck with the width of the bolt to be furnished with each lot of 50 lengths or less for sampling, inspecting and testing purposes.

• • •

THE SPIGOT AND THE BUNGHOLE: Personnel Leaflet No. 4. 3½ x 6", 11 pp. Issued by the Personnel Division, Policy Holders Service Bureau, Metropolitan Life Insurance Co., New York City.

Absence and tardiness are problems with which all employers have to wrestle, no matter how small or large their working force may be. In the case of the employer whose employees number hundreds, and sometimes thousands, the evil not only works havoc from the standpoint of discipline and morale, but reacts directly on the financial side of the business through idleness of machines and equipment and the enlarging of the payroll.

Managers have tackled the problem from every side. Docking of wages, discharging of flagrant abusers, as examples to others and other forms of penalty have been imposed. The system recommended in this pamphlet favors reward instead of penalty. In fact all other remedies are summarily dismissed and the bonus idea and leave with pay are given the preference over all others. Keeping accurate records, devising a system of rewards, handling persistent cases in individual ways and keeping persistently at the system devised are given as the four steps that look toward elimination of the evil.

• • •

REPORT OF BOARD OF VISITORS TO BUREAU OF STANDARDS OF THE DEPARTMENT OF COMMERCE FOR THE SECRETARY OF COMMERCE. Publication of Bureau of Standards No. 63.

This report stresses the value to the public of the work carried on by the Bureau. Brief explanations of the various activities undertaken, i.e. construction of standards, comparison of standards, physical and chemical constants, testing of instruments and scientific and industrial research are given. Emphasizing the importance of such work to industry, the Board outlines future needs and expansion.

• • •

GLIMPSES OF BALLOON TIRE PROGRESS. By B. J. Lemon, Research Department, Tire Div., United States Rubber Co., Detroit. Published in the *Journal of the Society of Automotive Engineers* for February.

The balloon tire has run the gauntlet of skepticism and credulity, and has received scientific and popular approval from engineers and car-owners. The reasons for acceptance are satisfactory appearance, practicability and transportation comfort. Tire and rim sizes, masquerading for years under wrong dimensional markings, have caused immeasurable inconvenience. This condition resulted from poor standards or entire lack of standards supervision. A committee with backbone is needed to fix and to maintain standards.

Rapid balloon-tire tread-wear depends on tread profile, pressure and movement. Increased inflation-pressure and a scientifically designed tread will reduce the rapidity of this wear. Tread-contact areas and pressures are pictured to explain the advantages of a properly designed tread, and to demonstrate that the casing carries an appreciable part of the tire load. Tread configuration should assure traction, flexibility, easy steering and good wear, and should be not too rugged. Tread surface should be largely non-skid for best all-year and all-highway service. The public is confused by diverse balloon-tire inflation-pressure tables offered by tire and vehicle makers. One standard table can and should be adopted for all balloon tires.

Increasing the number of plies in a balloon tire increases the ease of entry of a puncturing object into the tread, but it decreases the probability of complete penetration and actual deflation from puncture. Gradual loss of air from tires is due chiefly to diffusion through the tube rubber. The rate depends on daily mileage, road conditions, tube quality and thickness. Average diffusion amounts to from 1 to 5 lb. per week.

Volume of noise in closed cars is no greater with balloon tires than with high-pressure tires, as indicated by audiometer measurements. Different cars show important differences in noise volume, due principally to differences in engines. Balloon tires are not a fundamental cause of shimmying. Improper balance between front-end units appears to offer the chief cause. There is no common remedy. More original and thorough research by experts in their particular fields is urged so that America will lead in the refinement as well as in the production of tires and automobiles.